Avery Weigh-Tronix

Model 1080

Indicator

User Instructions

AWT 35-500445 Issue AD April 2011

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Table of Contents

page

Chapter 1 General information and warnings 5
- About this manual 5
  - Text conventions 5
  - Special messages 5
- Installation 6
  - Safe handling of equipment with batteries 6
  - Wet conditions 6
- Routine maintenance 6
- Cleaning the machine 7
- Training 7
- Sharp objects 7
- FCC and EMC declarations of compliance 7
- Declaration of Conformity 8

Chapter 2 Introduction 10
- Specifications 10

Chapter 3 Front Panel 11
- Annunciators 12
- Numeric Entry Procedure 13

Chapter 4 Indicator Operations 14
- General Gross Weighing 14
- General Tare/Net Weighing 14
  - Using Outputs in the General Weighing Application 15
- Accumulator Weighing 16
  - Using Outputs in the Accumulator Application 17
- Batch Weighing 18
  - Auto Batching by Weight 21
  - Manual Batching by Percentage 22
- Checkweighing 23
  - Limits Mode: Entering Upper and Lower Limits 24
  - Performing a Checkweighment in Limits Mode 24
  - Sample Mode: Using Product to Set Target Weight 25
  - Performing a Checkweighment in Sample Mode 25
  - Using the Statistics Feature 25
  - Using Outputs in Checkweigher Application 28
  - Target Outputs 29
- Counting 30
  - Bulk Sampling 30
  - Dribble Sampling 31
  - Displaying Count Information 32
  - Using Outputs in the Counting Application 32
- Peak Weighing 33
  - Using Outputs 33
- Split (Axle) Weighing 35

Chapter 5 Communications 36
- Thermal Labels Print Formats 37

Chapter 6 Error Messages 39

Chapter 7 Menu Mode 40

User Menu 40
Supervisor Menu 41
DATE (Set date) 43
HOUR (Set time) 44
SETUP (Setup menu) 44
TEST (Test menu) 61
AUDIT (Audit counters) menu 65

Chapter 8 Indicator Diagnostics 67
Testing Indicator Functions 67

Chapter 9 Ethernet Industrial Protocols 70
Ethernet IP Explicit Messaging 70
AWTX Input Point Object (Data Out) 70
AWTX Output Point Object (Data In) 70
Ethernet IP Implicit Messaging 71
AWTX Assembly Instance for PLC Configuration 71
ModBus/TCP 71
Starting Register Locations for PLC Configuration 71

1 General information and warnings

1.1 About this manual

This manual is divided into chapters by the chapter number and the large text at the top of a page. Subsections are labeled as shown by the 1 and 1.1 headings shown above. The names of the chapter and the next subsection level appear at the top of alternating pages of the manual to remind you of where you are in the manual. The manual name and page numbers appear at the bottom of the pages.

1.1.1 Text conventions

Key names are shown in **bold** and reflect the case of the key being described. If a key has dual functions, the function is shown first followed by the key name in parentheses and in bold, such as in these examples: **F1**, **SELECT**, **PRINT**, etc.

Displayed messages appear in ***bold italic*** type and reflect the case of the displayed message.

1.1.2 Special messages

Examples of special messages you will see in this manual are defined below. The signal words have specific meanings to alert you to additional information or the relative level of hazard.

WARNING!
This is a Warning symbol.
Warnings mean that failure to follow specific practices and procedures may have major consequences such as injury or death.

CAUTION!
This is a Caution symbol.
Cautions give information about procedures that, if not observed, could result in damage to equipment or corruption to and loss of data.

NOTE: This is a Note symbol. Notes give additional and important information, hints and tips that help you to use your product.

1.2 Installation

NO USER SERVICEABLE PARTS. REFER TO QUALIFIED SERVICE PERSONNEL FOR SERVICE.

1.2.1 Safe handling of equipment with batteries

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

ATTENTION: Il y a danger d'explosion s'il y a remplacement incorrect de la batterie, remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

1.2.2 Wet conditions

Under wet conditions, the plug must be connected to the final branch circuit via an appropriate socket / receptacle designed for washdown use.

Installations within the USA should use a cover that meets NEMA 3R specifications as required by the National Electrical Code under section 410-57. This allows the unit to be plugged in with a rain tight cover fitted over the plug.

Installations within Europe must use a socket which provides a minimum of IP56 protection to the plug / cable assembly. Care must be taken to make sure that the degree of protection provided by the socket is suitable for the environment.

1.3 Routine maintenance

IMPORTANT: This equipment must be routinely checked for proper operation and calibration.
Application and usage will determine the frequency of calibration required for safe operation.

Always turn off the machine and isolate from the power supply before starting any routine maintenance to avoid the possibility of electric shock.

1.4 Cleaning the machine

Table 1.1 Cleaning DOs and DON'Ts

DO	DO NOT
Wipe down the outside of standard products with a clean cloth, moistened with water and a small amount of mild detergent	Attempt to clean the inside of the machine
	Use harsh abrasives, solvents, scouring cleaners or alkaline cleaning solutions
Spray the cloth when using a proprietary cleaning fluid	Spray any liquid directly on to the display windows

1.5 Training

Do not attempt to operate or complete any procedure on a machine unless you have received the appropriate training or read the instruction books.

To avoid the risk of RSI (Repetitive Strain Injury), place the machine on a surface which is ergonomically satisfactory to the user. Take frequent breaks during prolonged usage.

1.6 Sharp objects

Do not use sharp objects such as screwdrivers or long fingernails to operate the keys.

1.7 FCC and EMC declarations of compliance

United States

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Canada

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Classe A prescrites dans le Règlement sur le brouillage radioélectrique edicté par le ministère des Communications du Canada.

European Countries

WARNING: This is a Class A product. In a domestic environment, this product may cause radio interference in which the user may be required to take adequate measures.

1.8 Declaration of Conformity

Avery Weigh-Tronix

Foundry Lane, Smethwick, West Midlands B66 2LP, England

CE

Declaration of Conformity
Verklaring van Overeenstemming
Déclaration de Conformité
Konformitätserklärung
Dichiarazione di conformità
Declaración de Conformidad

Manufacturer	Avery Weigh-Tronix Limited
Type	1080
No. of EC type approval certificate	UK2880

corresponds to the requirements of the following EC directives:

EMC Directive	2004/108/EC
Low Voltage Directive	2006/95/EC
Non-Automatic Weighing Instruments Directive	2009/23/EC[1]

The applicable harmonised standards are:

EN 45501 : 1994 EN 60950–1 : 2006	EN 61000–6–1 : 2006 EN 61000–6–3 : 2006

Note [1]:
This declaration is only valid if the non–automatic weighing instrument was verified by the manufacturer or with a certificate of conformity issued by a notified body.

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Registered in England No: 595129

Fabrikant	Avery Weigh-Tronix Limited
Type	1080
Nummer van de Verklaring van EG–typegoedkeuring	UK2880

is in overeenstemming met de voorschriften van de volgende EG richtlijnen:

EMC Richtlijn	2004/108/EC
Laagspanningsrichtlijn	2006/95/EC
Richtlijn niet-automatische weegwerktuigen	2009/23/EC[1]

Toegepaste geharmoniseerde normen:

EN 45501 : 1994 EN 60950–1 : 2006	EN 61000–6–1 : 2006 EN 61000–6–3 : 2006

Noot [1]:
Deze verklaring is alleen geldig indien het weegwerktuig door de fabrikant is geverifieerd, of met een Verklaring van overeenstemming, afgegeven door een bevoegde instantie.

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Fabricant	Avery Weigh-Tronix Limited
Type	1080
No. de certificat d'approbation de type CE	UK2880

correspond aux exigences des directives CE suivantes :

Directive CEM	2004/108/EC
Directive Basse Tension	2006/95/EC
Directive pour les instruments de pesage à fonctionnement non automatique	2009/23/EC[1]

Les normes harmonisées applicables sont :

EN 45501 : 1994 EN 60950–1 : 2006	EN 61000–6–1 : 2006 EN 61000–6–3 : 2006

Nota [1] :
Cette déclaration est valide seulement si l'instrument de pesage à fonctionnement non automatique a été vérifié par le fabricant ou avec une attestation de conformité délivrée par un organisme notifié.

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Registered in England No: 595129

Hersteller	Avery Weigh-Tronix Limited
Typ	1080
Nr. der EG–Bauartzulassung	UK2880

entspricht den Anforderungen folgender EG–Richtlinien:

EMV-Richtlinie	2004/108/EC
Niederspannungs Richtlinie	2006/95/EC
Waagenrichtlinie für nichtselbsttätige Waagen	2009/23/EC[1]

Die angewendeten harmonisierten Normen sind:

EN 45501 : 1994 EN 60950–1 : 2006	EN 61000–6–1 : 2006 EN 61000–6–3 : 2006

Anmerkung [1]:
Diese Erklärung gilt nur, wenn die nichtselbsttätige Waage vom Hersteller geeicht wurde oder in Verbindung mit einer Konformitätsbescheinigung einer benannten Stelle.

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Produttore	Avery Weigh-Tronix Limited
Modello	1080
N. di certificato di approvazione di tipo CE	UK2880

è conforme alle caratteristiche previste dalle seguenti direttive CE:

Normativa EMC	2004/108/EC
Normativa per la bassa tensione	2006/95/EC
Normativa per strumenti di pesatura non automatici	2009/23/EC[1]

Le norme standard armonizzate e nazionali applicate sono:

EN 45501 : 1994 EN 60950–1 : 2006	EN 61000–6–1 : 2006 EN 61000–6–3 : 2006

Nota [1]:
Questa dichiarazione è valida solamente se lo strumento di pesatura non automatico è stato verificato dal produttore o provvisto di un certificato di conformità rilasciato da un ente riconosciuto.

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Fabricante	Avery Weigh-Tronix Limited
Tipo	1080
Número del certificado de aprobación de tipo CE	UK2880

conforme a las exigencias de las siguientes directivas CE:

Directiva CME	2004/108/EC
Directiva de baja tensión	2006/95/EC
Directiva para equipos de pesaje no automáticos	2009/23/EC[1]

Las normas armonizadas en vigor son:

EN 45501 : 1994 EN 60950–1 : 2006	EN 61000–6–1 : 2006 EN 61000–6–3 : 2006

Nota [1]:
Esta declaración es válida solamente si el equipo de pesaje no automático ha sido verificado por el fabricante o con certificado de conformidad emitido por un organismo notificado.

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Registered in England No: 595129

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		5 January 2010	

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Avery Weigh-Tronix

Foundry Lane, Smethwick, West Midlands B66 2LP, England

CE

Declaration of Conformity

Manufacturer	Avery Weigh-Tronix Limited
Type	1080 Automatic Gravimetric Filling Instrument
No. of EC type examination certificate	UK/0126/0070

corresponds to the requirements of the following EC directives:

Measuring Instruments Directive	2004/22/EC
EMC Directive	2004/108/EC
Low Voltage Directive	2006/95/EC

The applicable harmonised standards are:

OIML R61 EN 60950–1 : 2006	EN 61000–6–1 : 2006 EN 61000–6–3 : 2006

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West Midlands B66 2LP, England.
Registered in England No: 595129

Verklaring van Overeenstemming

Fabrikant	Avery Weigh-Tronix Limited
Type	1080 Automatic Gravimetric Filling Instrument
Nummer van de EG–onderzoeks certificaat	UK/0126/0070

is in overeenstemming met de voorschriften van de volgende EG richtlijnen:

Richtlijn betreffende meetinstrumenten	2004/22/EC
EMC Richtlijn	2004/108/EC
Laagspanningsrichtlijn	2006/95/EC

Toegepaste geharmoniseerde normen:

OIML R61 EN 60950–1 : 2006	EN 61000–6–1 : 2006 EN 61000–6–3 : 2006

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Reg. Office: Foundry Lane, Smethwick,
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Déclaration de Conformité

Fabricant	Avery Weigh-Tronix Limited
Type	1080 Automatic Gravimetric Filling Instrument
No. de certificat d'examination de type CE	UK/0126/0070

correspond aux exigences des directives CE suivantes :

Directive relative aux instruments de mesure	2004/22/EC
Directive CEM	2004/108/EC
Directive Basse Tension	2006/95/EC

Les normes harmonisées applicables sont :

OIML R61 EN 60950–1 : 2006	EN 61000–6–1 : 2006 EN 61000–6–3 : 2006

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Reg. Office: Foundry Lane, Smethwick,
West Midlands B66 2LP, England.
Registered in England No: 595129

Konformitätserklärung

Hersteller	Avery Weigh-Tronix Limited
Typ	1080 Automatic Gravimetric Filling Instrument
Nr. des EG–Bauartprüfscheins	UK/0126/0070

entspricht den Anforderungen folgender EG–Richtlinien:

Richtlinie für Messgeräte	2004/22/EC
EMV-Richtlinie	2004/108/EC
Niederspannungs Richtlinie	2006/95/EC

Die angewendeten harmonisierten Normen sind:

OIML R61 EN 60950–1 : 2006	EN 61000–6–1 : 2006 EN 61000–6–3 : 2006

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Dichiarazione di conformità

Produttore	Avery Weigh-Tronix Limited
Modello	1080 Automatic Gravimetric Filling Instrument
N. di certificato di verifica di tipo CE	UK/0126/0070

è conforme alle caratteristiche previste dalle seguenti direttive CE:

Direttiva relativa agli strumenti di misura	2004/22/EC
Normativa EMC	2004/108/EC
Normativa per la bassa tensione	2006/95/EC

Le norme standard armonizzate e nazionali applicate sono:

OIML R61 EN 60950–1 : 2006	EN 61000–6–1 : 2006 EN 61000–6–3 : 2006

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West Midlands B66 2LP, England.
Registered in England No: 595129

Declaración de Conformidad

Fabricante	Avery Weigh-Tronix Limited
Tipo	1080 Automatic Gravimetric Filling Instrument
Número del certificado de evaluación de tipo CE	UK/0126/0070

conforme a las exigencias de las siguientes directivas CE:

Directiva relativa a los instrumentos de medida	2004/22/EC
Directiva CME	2004/108/EC
Directiva de baja tensión	2006/95/EC

Las normas armonizadas en vigor son:

OIML R61 EN 60950–1 : 2006	EN 61000–6–1 : 2006 EN 61000–6–3 : 2006

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2 Introduction

The Model 1080, shown in Figure 2.1,is an easy to use, uncomplicated, panel mount indicator for weighing with the built-in capability to provide network controls and share data via Ethernet, PROFIBUS and DeviceNet. It is ideal for tank weighing applications providing process control interface and data management. These same features are also available when used with applications using bench scales and floor scales. The display includes annunciators for fast visual awareness for checkweighing. Also the indicator can perform counting functions, peak weight functions, be an axle weigher and act as a remote display for all Avery Weigh-Tronix E-series indicators.

Figure 2.1 Front panel of the 1080 indicator

In addition to connecting to network interfaces, the 1080 can connect to printers, remote displays, computers and one SensorComm.

SensorComm available in North America only.

There are three setpoint control outputs and the indicator can accommodate three remote switch inputs for Zero, Print, Tare, Units, F1, Start and Stop.

2.1 Specifications

Power Requirements:	9-36 VDC 5Amps
Climatic Environment:	-10 to + 40C, closed, non-condensing
EM Classification:	E2
Weight:	2.75 lb, 1.25kg
Dimensions:	6.06 inch W x 3.23 inch H x 5.82 inch D (154mm W x 82mm H x 148mm D)

3 Front Panel

The front panel, shown in Figure 3.1, consists of the keys and display.

Never press a key with anything but your finger. Damage to the overlay may result if sharp or rough objects are used.

Figure 3.1 Model 1080 front panel

There are seven keys on the front panel. Their functions are listed below.

TARE	Press the **TARE** key to perform a tare function. Also acts as a left arrow key when in the menu structure.
SELECT	Press the **SELECT** key to toggle between Gross, Net, Tare, Count, Gross Accumulator, Net Accumulator, Transaction Counter, Piece Weight, and Peak. Dependent on the current application. Also acts as an up arrow key when in the menu structure. Press and hold to access the outputs menu.
ZERO	Press the **ZERO** key to zero the display. Also acts as an Escape key when in the menu structure.
PRINT	Press the **PRINT** to send information to a peripheral device through the Comm port. Also acts as a down arrow key when in the menu structure.
UNITS	Press the **UNITS** key to scroll through the available units of measure while in normal operating mode. Also acts as a right arrow key when in the menu structure.
F1	Press the **F1** key to select application specific choices. Also acts as an ENTER key in the menu structure
	Press and release the **ON/OFF** key to turn the unit on. Press and hold the key until the unit turns off.

3.1 Annunciators

There are several annunciators around the edge of the display. Figure 3.2 explains each one.

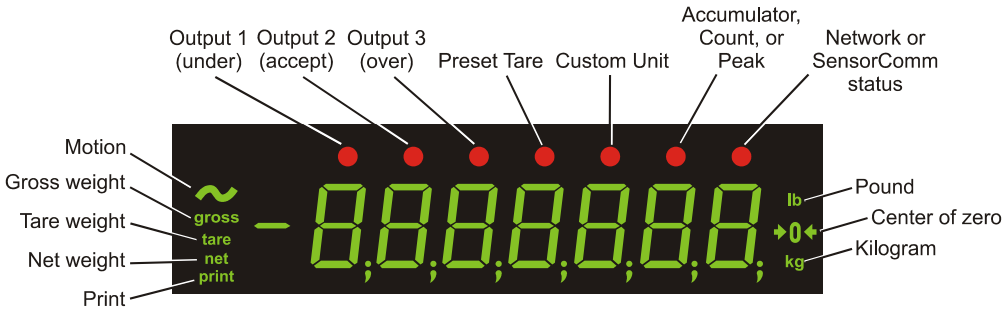


Figure 3.2 Annunciators.

Motion	Lights during scale motion. Goes out when scale is stable
Gross	Lights when gross weight is displayed
Net	Lights when net weight is displayed
Tare	Lights when tare weight is displayed
Print	Lights when print format sent through serial port
OP 1 (Under)	Lights when output one is activated or for Under condition during checkweighing
OP 2 (Accept)	Lights when output two is activated or for Accept condition during checkweighing
OP 3 (Over)	Lights when output three is activated or for Over condition during checkweighing
Preset Tare	Lights when preset tare is active
Custom Unit	Lights when a custom unit of measure is active
Accumulator, Count or Peak	Lights when an accumulation occurs and while in the count and peak applications
Network & SensorComm Status	This is configurable to light to show status of the Network 1, Network 2 or SensorComm. See the note following this table. (**SensorComm available in North America market only**.)
LB	Lights when pounds is the active unit of measure
Center of Zero	Lights when weight on the scale is within the zero range
KG	Lights when kilograms is the active unit of measure

Far Right LED color
(Chosen as SCOM or Network in configuration. Can't be both.) SCOM:
Red – a cell has been ghosted. Check the ghost log.
Green – a sensorcomm error has occurred. Check the error log.
Off – Scale is functioning normally.

Network 1 or 2:
Red – A network error has occurred. Check the network settings on the indicator and PLC, and reboot the indicator.
Green – The network connection has been established.
Amber – The network is ready for a connection, but no connection has been established

3.2 Numeric Entry Procedure

Some keys have alternate functions when you need to enter numbers. See Figure 3.3.

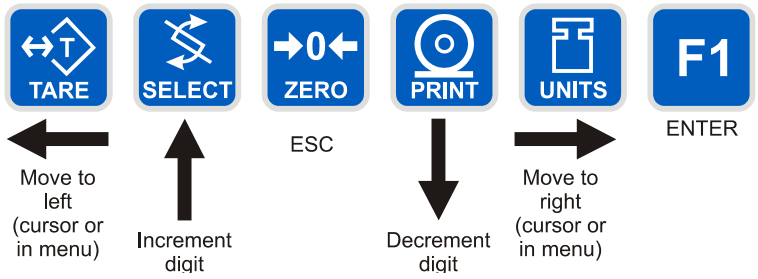


Figure 3.3 Alternate key functions

Press the **ZERO** *key to terminate a value entry and leave the previous value, if any, active*

In screens where numeric entry is possible, choose the first digit using the **SELECT** or **PRINT** keys. Use the **TARE** and **UNITS** keys to advance or backspace through the entry. Press the **F1** key to accept an entry. Below is an example:

Example: To key in the number 507:

Repeatedly press the **SELECT** or **PRINT** key until 5 appears on the display.

Press the **UNITS** key once to move cursor one space to the right.

Repeatedly press the **SELECT** or **PRINT** key until 0 appears on the display.

Press the **UNITS** key once to move cursor one space to the right.

Repeatedly press the **SELECT** or **PRINT** key until 7 appears on the display.

Press the **F1** key to enter the value.

4 Indicator Operations

The Model 1080 comes equipped with several weighing applications;

- General weighing (default setting)
- Accumulator weighing
- Batch weighing
- Checkweighing
- Counting
- Peak weighing
- Split or Axle weighing

The 1080 can also perform as a remote display if so enabled. Ask your supplier for information about setting up this indicator as a remote display.

These different applications are activated using a password protected menu. *Contact your local supplier for assistance with the password protected menu and enabling applications.*

The general weighing application comes as the default application. You can do gross weighments, tare/net weighments and print a print format. Below are instructions for each.

4.1 General Gross Weighing

To change unit of measure, press the **UNITS** *key.*

To perform gross weighing, power up the unit and follow these steps:

1. Empty the scale and press **ZERO** key to zero the display…

   0 is displayed.

2. Place item to be weighed on the scale…

   Weight is displayed.

4.2 General Tare/Net Weighing

To perform a net weighment, power up the unit and follow these steps:

1. Empty the scale and press **ZERO** key to zero the display…

   0 is displayed.

2. Place item to be tared on the scale…

   Weight is displayed.

3. Press the **TARE** key…

   0 is displayed and the *NET* annunciator lights.

To clear a tare weight, remove all weight from the scale and press the **TARE** *key.*

4. Place material to be weighed on the scale…

   Net weight of material is displayed.

5. Repeatedly press the **SELECT** key to scroll through gross, tare, and net modes. Remove the weight from the scale and press **TARE** to return to gross mode.

4.2.1 Using Outputs in the General Weighing Application

The output will trigger when weight goes above the target set for that output and will remain on until the weight falls below the target. Follow these steps to configure three outputs:

1. With the indicator powered up, press and hold the **SELECT** key until…

   OP1 is displayed.

2. Press the **PRINT** key to set the value for the output…

   Use the numeric entry procedure to key in a value, see note below, and press the **F1** key to accept the value. ***OP1*** will be displayed

   OR

   Press the **ZERO** key to select the next output.

3. Repeat step 2 for each output. Press **ZERO** key to select the next output and then return to normal operation with the ingredients active.

Choose the first digit using the UP or DOWN keys. Use the LEFT and RIGHT keys to advance or backspace through the entry.

Output operation in the general weighing application:
Below Configured Value:
Outputs are ON
Annunciators are OFF
TIU3 Relays are ON

Above Configured Value:
Outputs are OFF
Annunciators are ON
TIU3 Relays are OFF

4.3 Accumulator Weighing

The accumulator is memory that collects individual weighments (gross and net) and stores the totals. These totals can be recalled at any time. The number of weighments included in the totals can be displayed and all information can be reviewed and deleted.

To use the accumulator, power up the unit and follow these steps:

1. Empty the scale and press **ZERO** key to zero the display…

   0 is displayed.

2. Place item on the scale…

   Weight is displayed.

You can use tare/net weighing with the accumulator application. The accumulator stores both gross and net totals for later recall.

3. Press the **F1** key or **PRINT** key to add weight to the accumulator. Pressing the **PRINT** key also prints the default print format …

   A circle annunciator lights briefly on the right side of the display to show the weight was accumulated.

4. Remove weight from the scale. Weight must return to zero before another accumulation can be recorded.

5. Repeat steps 2 through 4 for each weighment you want to accumulate.

6. To review the accumulator total and the number of weighments, remove all weight from the scale and press the **SELECT** key repeatedly…

   1st press = Net weight displayed

   2nd press = Tare weight displayed

   3rd press = Display toggles between showing ACCUM. and gross total of all weighments

   4th press = Display toggles between showing ACCUM. and net total of all weighments

   5th press = Display toggles between showing TOTAL and number of weighments

   6th press = Display returns to gross weigh mode

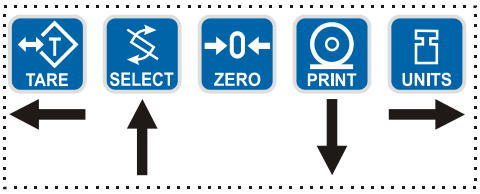
You must remove all weight from the scale to scroll through the items listed above. With weight on the scale, repeatedly pressing the **SELECT** key *will only show the gross, net and tare values.*

You need the supervisor's password to clear the accumulator. See *Supervisor Menu on page 41*

4.3.1 Using Outputs in the Accumulator Application

If enabled, you can use the outputs function while in the accumulator application. Outputs are enabled in a password protected menu. *Contact your local supplier for assistance with the password protected menu.* Follow these steps to set up to three

Choose the first digit using the UP or DOWN keys. Use the LEFT and RIGHT keys to advance or backspace through the entry.



Output operation in the Accumulator application:
Below Configured Value:
Outputs are ON
Annunciators are OFF
TIU3 Relays are ON

Above Configured Value:
Outputs are OFF
Annunciators are ON
TIU3 Relays are OFF

outputs:

1. With the indicator powered up, press and hold the **SELECT** key until…

   OP1 is displayed.

2. Press the **PRINT** key…

   The current value for OP1 is displayed.

3a. Press the **F1** key to accept the displayed value

OR

3b. Key in a value using the numeric entry procedure, see note at left, and press the **F1** key.

   OP1 is displayed.

4. Scroll through all three outputs by using the **TARE** or **UNITS** key.

   Repeat steps 2 and 3a or 3b for each output.

5. Press **ZERO** key…

   SAvE is displayed.

6. Press the **F1** key to save the changes or the **ZERO** key to abort the changes…

   The unit returns to normal operation mode with the saved outputs active.

7. As you apply weight to the scale, output one will activate below its setpoint and deactivate above its setpoint. The same is true for the other two setpoints. Each output's annunciator will light on the display when the output value is reached.

4.4 Batch Weighing

This section applies if your indicator has the batching application active.

The batching application has a recipe with up to eight ingredients. In the recipe, the following items are set.

Batch type can be by weight, percentage or gross. Each explained below.

Constant Weight Batches are all the same size and the weight of each ingredient is predetermined by the recipe.

Percentage Batch size is chosen by the operator and each ingredient is determined by the percentage set in the recipe.

Gross Each ingredient runs until the gross weight on the scale reaches the value that was set, regardless of the weight on the scale when the batch was started.

After a batch has been started, it can be aborted by pressing the **F1** key.

Batching mode can be Manual, Automatic, Filling, Reverse Filling or Continuous.

Manual If the recipe is set up for manual mode, you press the **F1** key to start the batch and you need to press the **F1** key each time a setpoint is reached to activate the next ingredient output. See **important** note below.

When in Manual Mode, you must press the **F1** *key during ingredient filling to abort the operation. If you press* **F1** *during a configured delay time, the key press is ignored. An* **F1** *press after the delay time will start the next ingredient.*

Automatic If the recipe is set up for automatic mode, you press the **F1** key to start the batch and each output is activated and deactivated automatically by the indicator.

Filling In Fill mode, any recipe that has been setup is ignored. The filling process is run based on the values set for the outputs. In order to complete the filling process, at least one output must be enabled. See the following note.

The batching modes, Filling and Reverse Filling, can be configured to operate in two ways.

Absolute mode *Setpoints activate when the **F1** key is pressed. When the net weight on the scale reaches the configured output value, the setpoint will deactivate.*

Relative mode *When the **F1** key is pressed, the starting weight is captured and the outputs activate. The output will not deactivate until the net weight on the scale reaches the starting weight plus the configured output value.*

See Batch Weighing on page 18 for information about setting these modes.

Reverse Fill In reverse filling mode, any recipe that has been setup is ignored. The reverse filling process is run based on the values set for the outputs. In order to complete the filling process, at least one output must be enabled. See the previous note and the following instructions:

1. Press the **F1** key to begin the reverse filling process.

2a. If output one is enabled, and the net weight on the scale is above the value of the output, output 1 will come on.

2b. If output two is enabled, and the net weight on the scale is above the value of the output, output 2 will come on.

2c. If output three is enabled, and the net weight on the scale is above the value of the output, output 3 will come on.

3. Each output will remain on until its output value is met.

4. The reverse filling process can be restarted by pressing the **F1** key.

Continuous Continuous batching mode. This mode is very close to the Auto mode but, in continuous mode another batch is started immediately after the previous batch has finished. In auto mode the user must press the **F1** key to start each batch.

The *Basis* of each ingredient can be weight or time.

Weight If an ingredient basis is weight, the output activates at the appropriate time and deactivates when the weight set in the recipe is reached.

Time If an ingredient basis is time, the output activates for the time set in the recipe and then deactivates.

In filling mode the process can be changed by changing the value(s) of the outputs.

Output operation in the Batching application:
Before activation by recipe:
Outputs are OFF
Annunciators are OFF
TIU3 Relays are OFF

After activation by recipe:
Outputs are ON
Annunciators are ON
TIU3 Relays are ON

Follow these steps to set up the three outputs:

1. With the indicator powered up, press and hold the **SELECT** key until…

   OP1 is displayed.

2. Press the **PRINT** key…

   The current value for OP1 is displayed.

3. Press the **F1** key to accept the displayed value (or **ZERO** to abort) or key in a value and press the **F1** key.

   OP1 is displayed.

4. Scroll through all three outputs by using the left and right arrow keys.

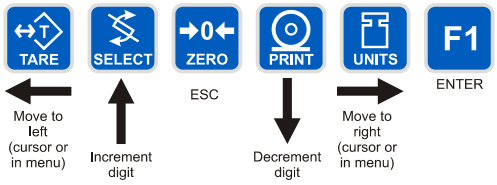
5. Repeat steps 2 and 3 for each output.

6. Press the **ZERO** key to exit the outputs setup.

7. Press **F1** to save the changes or the **ZERO** key to abort the changes

In automatic or manual mode, a recipe must be setup. The recipe values are set in a password protected menu. However, a shortcut can be used to change the amount of each ingredient.

Key legend reminder.



To access this shortcut menu:

1. Press and hold the **SELECT** key until

   ingr 1 is displayed

2. Press the **PRINT** key to change the amount of ingredient 1 to batch.

   A numerical value is displayed.

3. Scroll in a new value and press **F1** or press the **F1** key to accept the displayed value. The **UNITS** and **TARE** keys allow you to access all 8 ingredients.

4. When finished, press the **ZERO** key to escape from this menu.

   Save will be displayed.

5. To save the changes you made, press **F1**. To exit without saving, press the **ZERO** key.

The batch type, batch mode, and ingredient basis cannot be changed through this shortcut. *Contact your local supplier for assistance in creating a recipe.*

4.4.1 Auto Batching by Weight

Following is an example of batching for a recipe set as follows:

Batch type: Constant
Batch mode: Automatic
Basis: Weight

1. With the indicator powered up and the scale empty, zero the scale by pressing the **ZERO** key…

   0 is displayed.

2. Press the **F1** key…

   The *OP1* annunciator lights and output 1 is activated.

3. Add weight to the scale…

   When the weight reaches the setpoint for ingredient 1, *OP1* annunciator light goes out, *OP2* annunciator lights and output 2 activates. See note below.

Each ingredient may have a built in delay time between deactivation of one ingredient and activation of the next.

4. Add weight to the scale…

   When the weight reaches the setpoint for ingredient 2, *OP2* annunciator light goes out, *OP3* annunciator lights and output 3 activates. See the note above.

5. Add weight to the scale…

   When the weight reaches the setpoint for ingredient 3, *OP3* annunciator light goes out and output 3 deactivates.

6. Empty the scale and repeat steps 1 through 5 for the next batch.

4.4.2 Manual Batching by Percentage

Following is an example of batching for a recipe set as follows:

Batch type: Percentage
Batch mode: Manual
Basis: Weight

1. With the indicator powered up and the scale empty, zero the scale by pressing the **ZERO** key…

   0 is displayed.

2. Press the **F1** key…

   The *OP1* annunciator lights and output 1 is activated.

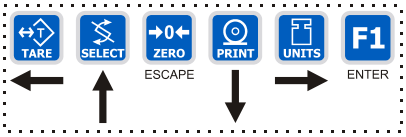
3a. Press the **F1** key to accept the batch size

OR

3b. Key in a new batch size, see note below, and press the **F1** key…

   The *OP1* annunciator lights and output 1 is activated.

Choose the first digit using the UP or DOWN keys. Use the LEFT and RIGHT keys to advance or backspace through the entry.



4. Add weight to the scale…

   When the weight reaches the percentage of the batch size set in the recipe for ingredient 1, *OP1* annunciator light goes out.

5. Wait for the delay to elapse and then press the **F1** key…

   OP2 annunciator lights and output 2 activates.

6. Add weight to the scale…

   When the weight reaches the percentage of the batch size set in the recipe for ingredient 2, *OP2* annunciator light goes out.

7. Press the **F1** key…

   OP3 annunciator lights and output 3 activates.

8. Add weight to the scale…

   When the weight reaches the percentage of the batch size set in the recipe for ingredient 3, *OP3* annunciator light goes out and output 3 deactivates.

9. Empty the scale and repeat steps 1 through 8 for the next batch.

4.5 Checkweighing

The checkweighing annunciators are based off of net weight so if a tare is active only the net weight is considered for checkweighing. If there is no tare, gross weight is used as the basis for the annunciators.

This section applies if your indicator has the checkweighing application active. Applications are activated through a password protected menu. Contact your local supplier for assistance with the password protected menu.

Checkweighing allows a quick, visual check of the acceptability or unacceptability of an item's weight. See Figure 4.1.

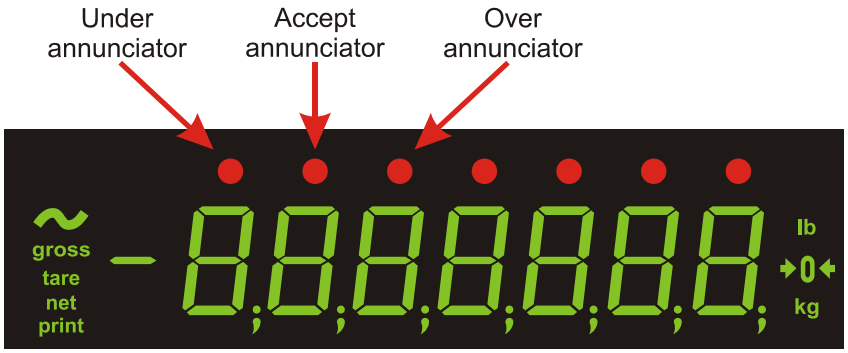


Figure 4.1 Checkweighing annunciators

You set your target weight in one of two ways. It depends on how your indicator is configured. The choice is made in the Supervisor menu. See *TARGET application (Checkweighing) on page 52*

Your unit will be configured with limits mode or sample mode. Each are explained below;

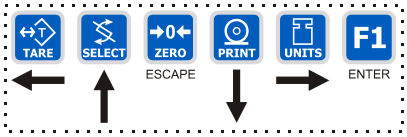
Limits Mode Enter the upper and lower limits for the item and the indicator will use those values to run the display.

Sample Mode Place a correct weight "product" on the scale and press the **F1** key. The indicator will use this weight to run the display. The *TARGET* light stays lit if weight is within the upper and lower limits.

Directions for using each mode follows.

4.5.1 Limits Mode: Entering Upper and Lower Limits

Choose the first digit using the UP or DOWN keys. Use the LEFT and RIGHT keys to advance or backspace through the entry.



You can repeatedly press the **SELECT** key to view the items listed in the Sample and Limits modes on this page.

Follow these steps to setup and use the checkweigher in limits mode:

1. Empty the scale, press the **ZERO** key to zero the display, then press the **F1** key…

   Hi is displayed.

2. Key in the upper weight limit using the numeric entry procedure. Press the **F1** key to accept the value or the **ZERO** key to skip…

   LO is displayed.

3. Key in the lower weight limit using the numeric entry procedure. Press the **F1** key to accept the value…

   Place item(s) on the scale and the three left annunciator lights along the top of the display will show if the weight is under, acceptable or over based on the limits you have set.

You can repeatedly press the **SELECT** key to view the following from the gross weight display:

1st press Net annunciator lights and net weight is displayed.

2nd press Tare annunciator lights and tare weight is displayed.

3rd press Display toggles between HI and the upper weight tolerance, in the current unit of measure.

4th press Display toggles between LO and the lower weight tolerance, in the current unit of measure.

5th press Display returns to gross weighing mode.

4.5.2 Performing a Checkweighment in Limits Mode

1. With your target weight set as described above, place your item on the scale…

   If the weight is within the upper and lower tolerances you set, the second annunciator from the left lights. If not, the first or third annunciator will be lit.

2. Repeat step 1 for all products of this weight.

4.5.3 Sample Mode: Using Product to Set Target Weight

Follow these steps to setup and use the checkweigher in sample mode:

1. Zero the empty scale then place a sample of the correct weight on the scale…

   Weight is displayed.

2. Press the **F1** key.

   The weight is captured, the display reads 0 (net weight) and your indicator is ready to use as a checkweigher. The target weight will be the same as your sample item and the second annunciator from the left will stay lit whenever an item's weight is within the upper and lower tolerances. By default this is ±1 division from the target weight.

You can repeatedly press the **SELECT** key to view the following from the gross weight display:

1st press Net annunciator lights and net weight is displayed.

2nd press Tare annunciator lights and tare weight is displayed.

3rd press Display toggles between HI and the upper weight tolerance, in the current unit of measure.

4th press Display toggles between LO and the lower weight tolerance, in the current unit of measure.

5th press Display returns to gross weighing mode.

4.5.4 Performing a Checkweighment in Sample Mode

1. With your target weight set as described above, place your item on the scale…

   If the weight is correct, 0 is displayed and the second annunciator from the left lights. If the weight varies from the target value, first or third annunciator will be lit and the weight will show a minus or plus weight reading for the deviation from the target weight.

2. Repeat step 1 for all products of this weight.

4.5.5 Using the Statistics Feature

If the statistical features are enabled, the user will be prompted to enter a sample size after the High and Low limits are set.

The target application must be setup in LIMITS mode, see TARGET application (Checkweighing) on page 52.

When the gross weight on the scale exceeds 10 divisions and the weight stabilizes, the weight is captured and added to the statistical data. The gross weight on the scale must return to the center of zero before another weighment can be captured.

The 1080 can operate in either Standard Deviation mode, X-bar/R mode or both modes together.

Standard Deviation Program

The Standard Deviation statistics option allows the 1080 in target mode to operate as a standard checkweigher that provides a statistical summary of the weighing process.

It allows selecting the number of samples to be weighed, prints out each weighment, or stores the weight data and prints out statistical analysis after the last sample weighment.

This operation allows you to automatically print each weighment and the statistical analysis or to store the weighments in memory and printout just the statistical analysis without the weighments.

The printout of the statistical analysis contains the following information.

Sample Printout

Over tolerance
Under tolerance

Number of weights **over** tolerance
Number of weights **under** tolerance
Number of weights **within** tolerance
Average weight
Highest weight
Lowest weight
Standard Deviation
Coefficient of Variance (percent)
Number of samples taken

```
OVER  =  4.600  lb
UNDR  =  3.200  lb

OVER  =  4
UNDER =  2
ACPT  =  9
AVG   =  4.0823  lb
HIGH  =  4.803  lb
LOW   =  3.002  lb
SD    =  0.6088
CV    = 14.91  PCT
SS    = 15
```

X-bar/R Program

The X-bar/R program is designed to weigh process samples, establish the average weight, calculate the range between high and low weights, and the trend of deviation.

If the X-bar/R feature is enabled, the 1080 will keep a queue of the average weights of the last 8 sample sets. This queue of averages is used to print trend information on the statistical reports.

Trend Message	Meaning
1 of 1	The last average in the queue has an error greater than 3x the limit
2 of 3	Two of the last three averages in the queue have an error greater that the limit.
4 of 5	Four of the last five averages have an error greater than the limit.
8 of 8	Eight of eight averages are on the same side of the target weight.

Example

With Weighments

```
  3.601  lb  OVER
  4.201  lb  OVER
  3.601  lb  OVER
  3.601  lb  OVER
  3.601  lb  OVER
  3.601  lb  OVER
  3.601  lb  OVER
  3.601  lb  OVER
  4.201  lb  OVER
  3.601  lb  OVER
  3.601  lb  OVER
  4.201  lb  OVER
  3.001  lb  OVER
  4.201  lb  OVER
  3.601  lb  OVER
OVER =        3.200  lb
UNDR =        2.900  lb

AVG  =        3.7120  lb
RNGE =        1.200  lb
1  OF  1
```

Weighments
Over weight limit
Under weigh limit
X-bar/R= (**Average** Weight)
Range= (Range of Weights)
Trend Message

Without Weighments

```
OVER =        3.100  lb
UNDR =        2.900  lb

AVG  =        3.5206 lb
RNGE =        1.20   lb
1  OF  1
```

Over weight limit
Under weigh limit
X-bar/R= (**Average** Weight)
Range= (Range of Weights)
Trend Message

Clearing statistical data

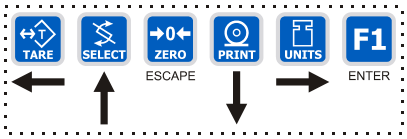
The statistical information is cleared in the following situations:

- If the X-bar/R feature is enabled, the statistical information is automatically cleared when the sample size is reached even if the indicator is not configured to print the report automatically.
- If you press the **PRINT** key to print the report, you are prompted to clear the information. If you press the **F1** key when prompted, the statistical information is cleared.
- When the active PLU channel is changed, both the statistical data and the X-bar/R average queue are cleared.
- When the over or under target values are changed, both the statistical data and the X-bar/R average queue are cleared.
- When the sample size is changed, both the statistical data and the X-bar/R average queue are cleared.
- If the indicator is configured to print reports automatically when the sample size is reached, the statistical data is cleared after the report is printed.

4.5.6 Using Outputs in Checkweigher Application

If enabled, you can use the outputs function while in the checkweigher application. Outputs are enabled in a password protected menu. Contact your local supplier for assistance with the password protected menu. Follow these steps to set up to three

Choose the first digit using the UP or DOWN keys. Use the LEFT and RIGHT keys to advance or backspace through the entry.



outputs:

Standard Outputs

1. With the indicator powered up in normal checkweighing mode, press and hold the **SELECT** key until…

   OP1 is displayed.

2. Press the **PRINT** key…

   The current value for OP1 is displayed.

3a. Press the **F1** key to accept the displayed value

OR

3b. Key in a value and press the **F1** key.

   OP1 is displayed.

4. Scroll through all three outputs by using the left and right arrow keys.

5. Repeat steps 2 and 3a or 3b for each output.
6. Press **ZERO** key to exit the outputs setup.
7. As you apply weight to the scale, output one will activate below its setpoint and deactivate above its setpoint. The same is true for the other two setpoints. Each output's annunciator will light on the display when the output value is reached.

Output operation in the Checkweigher application:
Outputs are OFF in gross zero band
Annunciators are OFF
TIU3 Relays are OFF

Outputs latch on for appropriate OVER, UNDER and ACCEPT
Annunciators are ON
TIU3 Relays are ON

4.5.7 Target Outputs

If outputs are configured for Target mode in the Supervisor menu, outputs will follow the limits and accept values. This means there is no additional configuration required.

4.6 Counting

This section applies if your indicator has the counting application active. Applications are activated through a password protected menu. *Contact your local supplier for assistance with the password protected menu.*

There are two types of sampling; bulk and dribble. These are selected in the same password protected menu mentioned above.

Bulk sampling In this sampling method you place the specified number of items on the scale all at once (in bulk) and the scale automatically starts to calculate piece weight and then shows the count.

Dribble sampling In this sampling method you can count out the specified number of items onto the scale and when you are ready, press the **F1** key and the scale starts to calculate piece weight and then shows the count.

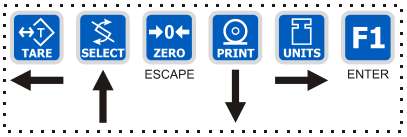
Each method is described below.

4.6.1 Bulk Sampling

1. In gross weight mode, press the **F1** key…

   A numeric value is displayed. This is the current sample size.

Choose the first digit using the UP or DOWN keys. Use the LEFT and RIGHT keys to advance or backspace through the entry.



2a. Accept the current sample size by pressing the **F1** key.

OR

2b. Enter a new sample size (see note at left) and press the **F1** key…

ZEroin is briefly displayed. This shows the indicator is zeroing itself. ***Add*** is then displayed.

3. Place the correct sample size on the scale all at the same time.

   If the sample meets the minimum sample requirements, ***Busy*** is briefly displayed, followed by one of two possible outcomes:

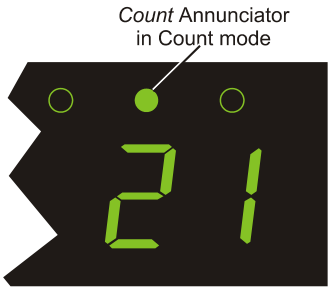
   a. If the weight is stable, the display will show the correct number of parts on the scale and the green annunciator is lit.

   b. If the sample was unstable, ***Abort*** is displayed and the display returns to gross weight mode. Repeat steps 1 through 3 using a larger sample size.

4. Place the parts on the scale to be counted.

5. You can accumulate the counts and track the number of transactions by pressing the **PRINT** key while in count mode. See *Displaying Count Information on page 32* about displaying this information.

The display is showing counts when the green annunciator, shown below, is lit.



4.6.2 Dribble Sampling

1. In gross weight mode, press the **F1** key…

   A numeric value is displayed. This is the current sample size.

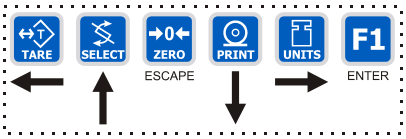
2a. Accept the current sample size by pressing the **F1** key

OR

2b. Enter a new sample size (see note below) and press the **F1** key…

   Zeroin is briefly displayed. This shows the indicator is zeroing itself. ***Add*** is then displayed.

Choose the first digit using the UP or DOWN keys. Use the LEFT and RIGHT keys to advance or backspace through the entry.



3. Place the correct sample size on the scale and press the **F1** key. ***Busy*** is briefly displayed, followed by one of two possible outcomes:

   a. If the sample met the minimum sample requirements and stable, the display will show the correct number of parts on the scale and the green annunciator is lit.

   b. If the sample size was not large enough or the weight was unstable, ***Abort*** is displayed and the display returns to gross weight mode. Repeat steps 1 through 3 using a larger sample size.

4. Place the parts on the scale to be counted.

5. You can accumulate the counts and track the number of transactions by pressing the **PRINT** key while in count mode. See *Displaying Count Information* below about displaying this information.

If the piece weight of the item being counted is known, you can manually enter the piece weight by keying in the weight with the keypad and pressing and holding the **SELECT** key.

4.6.3 Displaying Count Information

You can scroll through the following information by using the **SELECT** key:

From count display -

press **SELECT** - The word ***PiECE*** and the piece weight toggle on the display.

press **SELECT** - The word ***Cnttot*** and count total toggle on the display.

press **SELECT** - The word ***ToTAL*** and the total number of count transactions toggle on the display.

press **SELECT** - *Gross* annunciator lights and the gross weight is displayed.

press **SELECT** - *Net* annunciator lights and the net weight is displayed.

press **SELECT** - *Tare* annunciator lights and the tare weight is displayed.

press **SELECT** - The counts display is shown again.

4.6.4 Using Outputs in the Counting Application

If enabled, you can use the outputs function while in the counting application. Outputs are enabled in a password protected menu. *Contact your local supplier for assistance with the password protected menu.* Follow these steps to set up to three outputs:

1. With the indicator powered up, press and hold the **SELECT** key until…

   OP1 is displayed.

2. Press the **PRINT** key…

   The current value for OP1 is displayed.

3a. Press the **F1** key to accept the displayed value (or **ZERO** to abort)

OR

3b. Key in a value, see note below, and press the **F1** key.

   OP1 is displayed.

Output operation in the Counting application:
Below Configured Value:
Outputs are ON
Annunciators are OFF
TIU3 Relays are ON

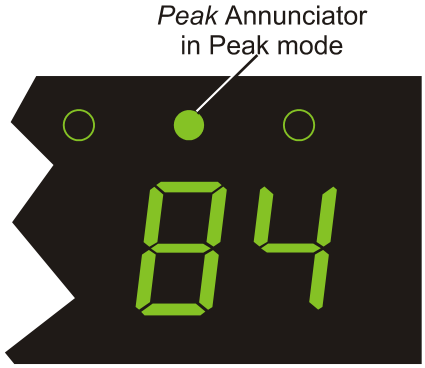
Above Configured Value:
Outputs are OFF
Annunciators are ON
TIU3 Relays are OFF

4. Scroll through all three outputs by using the left and right arrow keys.
5. Repeat steps 2 and 3a or 3b for each output.
6. Press **ZERO** key to exit the outputs setup.
7. As you apply weight to the scale, output one will activate below its setpoint and deactivate above its setpoint. The same is true for the other two setpoints. Each output's annunciator will light on the display when the output value is reached.

4.7 Peak Weighing

This section applies if your indicator has the Peak application active.

Only the highest stable weight applied to the scale is displayed in the Peak application when the peak weight value is selected to be displayed. Peak weight is designated by the green *Peak* LED annunciator. As a reminder that you are in peak mode, the green annunciator remains lit. See illustration below.



1. Add weight to the scale…

   Weight is displayed.
2. Remove weight…

   Peak weight is displayed.
3. To clear the peak value, be sure scale is empty and press the **F1** key…

   0 is displayed.
4. Repeat steps 1 through 3.
5. Press the **SELECT** key to cycle through Gross, Tare, Net and Peak.

4.7.1 Using Outputs

If enabled, you can use the outputs function while in the peak application. Outputs are enabled in a password protected menu. *Contact your local supplier for assistance with the password protected menu.* Follow these steps to set up to three outputs:

1. With the indicator powered up, press and hold the **SELECT** key until…

   OP1 is displayed.

2. Press the **PRINT** key…

   The current value for OP1 is displayed.

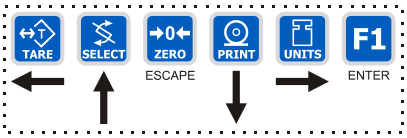
3a. Press the **F1** key to accept this value or the **ZERO** key to abort

OR

3b. Key in a value, see note below, and press the **F1** key.

   OP1 is displayed.

Choose the first digit using the UP or DOWN keys. Use the LEFT and RIGHT keys to advance or backspace through the entry.



Output operation in the Peak application:
Below Configured Value:
Outputs are ON
Annunciators are OFF
TIU3 Relays are ON

Above Configured Value:
Outputs are OFF
Annunciators are ON
TIU3 Relays are OFF

4. Scroll through all three outputs by using the left and right arrow keys.

5. Repeat steps 2 and 3a or 3b for each output.

6. Press **ZERO** key to exit the outputs setup…

7. Press the **F1** key to save the changes or the **ZERO** key to abort the changes.

8. As you apply weight to the scale, output one will activate below its setpoint and deactivate above its setpoint. The same is true for the other two setpoints. Each output's annunciator will light on the display when the output value is reached.

9. As weight is removed the displayed weight will remain unchanged due to being in peak mode but the OP annunciators will go out as each output is reached.

4.8 Split (Axle) Weighing

The Split (Axle) weighing function allows you to capture the weight of each of a vehicle's axles, print each axle weight and when finished, print a total axle weight.

The scale surface must fit between the axles for this application to work.

If this application is active, the following steps cover the general operation.

1. When the scale is empty there will be a green light or signal device to let the driver know they can drive the first axle onto the scale.
2. As the weight rises above a minimum set during 1080 configuration, the traffic light will turn red, signalling the driver to stop with the first axle fully on the scale.
3. When the weight stabilizes, the axle weight is captured and the weight information for the axle is sent to a connected printer.
4. After printing the information the 1080 will cause the signal or traffic light to turn green. The driver should pull ahead to empty the scale briefly then pull the next axle onto the scale.
5. Repeat steps 2-4 for each axle to be weighed.
6. When the preset time expires (no more axles to weigh) the total is printed and the system is reset for the next truck.

5 Communications

The Model 1080 provides an RS-232 output and a USB-to-Scale interface, via a virtual Com Port, for data transmission to a peripheral device. *Contact your local supplier for assistance with RS-232 or USB interface connections.*

The default serial port parameters are 9600 baud, 8 databits, no parity and 1 stop bit.

Stop bits for the serial communication are preset to 1 stop bit. This is not configurable.

If your indicator has a peripheral device connected, from the gross/net weighing mode press the **PRINT** key to transmit the selected output(s).

The *PRINT* annunciator will illuminate while data is transmitted and the data configured to be printed will be output to the printer.

Following are the default print formats

Print Formats 1-8 are for the Zebra Thermal printer. See examples on the following pages.

Print Formats 9-15 are for a standard ASCII characters for use with dot matrix printer.

Print Formats 9 & 10

```
G 123456 lb

{ACT}{DSP}{UN}<CR><LF>{EOS}
```

Accumulator (Print Format 11), Batching (12) and Checkweigher (13) all use the following:

```
G 123456 lb

{ACT}{DSP}{UN}<CR><LF>{EOS}
```

Counting, Print Format 14

```
Piece Count:  48

Piece Count: {CNT}<CR><LF>{EOS}
```

Peak Print Format 15

```
123456 lb

{PWT} {UN}<CR><LF>{EOS}
```

Remote Display Print Format 16

```
G 123456 lb

{ACT} {DSP} {UN}<CR><LF>{EOS}
```

The following are the default print formats are for the corresponding “Mode” setting in the serial port configuration menu.
17 Port 1 Enquire (HEX05)
18 Port 1 Broadcast
19 Port 1 RD4100
20 Port 2 Enquire (HEX05)
21 Port 2 Broadcast
22 Port 2 Remote display
23 default General Print format
24 default Axle Print format

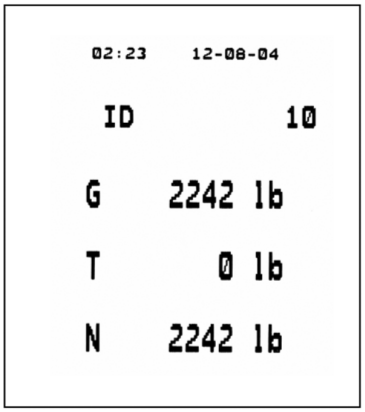
```
G 123456 lb
{ACT} {DSP} {UN}<CR><LF>{EOS}
```

5.1 Thermal Labels Print Formats

Format 1, 2 & 3

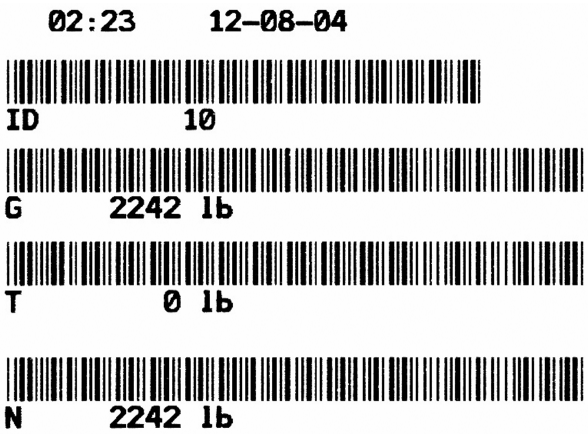
```
Time   Date
G      Gross Weight
T      Tare Value
N      Net Weight
```

Format 1 label 1.25” Wide x 1.00” Long
Format 2 label 2.50” Wide x 4.00” Long
Format 3 label 4.00” Wide x 6.00” Long



Print Format 4, same as above with barcode.

Label Size:
2.50” Wide
4.00” Long

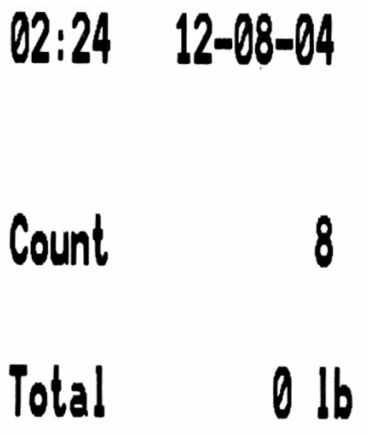


Thermal Labels Print Formats

Print Formats 5, 6 & 7

```
Time    Date
PLU Totals Information
Gross Total Accumulator
```

Format 5 label 1.25” Wide x 1.00” Long
Format 6 label 2.50” Wide x 4.00” Long
Format 7 label 4.00” Wide x 6.00” Long

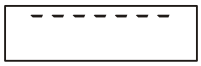
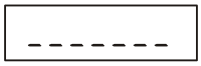
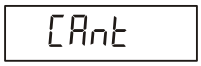


Print Format 8, same as above with barcode.

Label Size
2.50” Wide
4.00” Long

6 Error Messages

The following are displays you may see if problems occur or if invalid operations are attempted with your indicator:

Display	Description
	Over-range weight.
	Under-range weight.
	The unit cannot perform a function.
	Displayed while a key is pressed when attempting to modify a sealed selection without edit privileges.

7 Menu Mode

The Model 1080 has two menus you can use to set up and test the indicator: the User menu and the Supervisor menu. Both are explained below.

7.1 User Menu

The 1080 has a User menu you use to do the following:

- See software information
- Perform ADC test
- Perform a display test
- Perform a button test
- Perform a serial port test
- Audit the number of configurations and calibrations performed

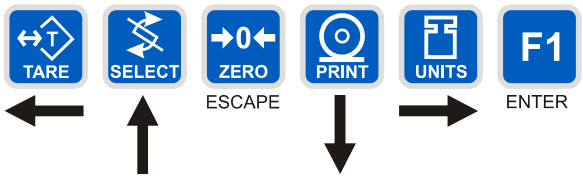
1. Access the User menu by pressing and holding the **ZERO** key for 3-5 seconds. Release the key when…

   PASS_ is displayed.

2. Use the **SELECT** and **PRINT** keys to scroll in the User menu password = 111 and the **F1** key. See note below. Figure 7.1 shows a flowchart of the User menu items. Use the keys shown in the box in Figure 7.1 to navigate through the menu and choose the items you want.

The User menu password is 111. You must key in the password within 10 seconds or the display returns to normal operation mode.

Choose the first digit using the **SELECT** *or* **PRINT** *keys. Use the* **TARE** *and* **UNITS** *keys to advance or backspace through the entry.*



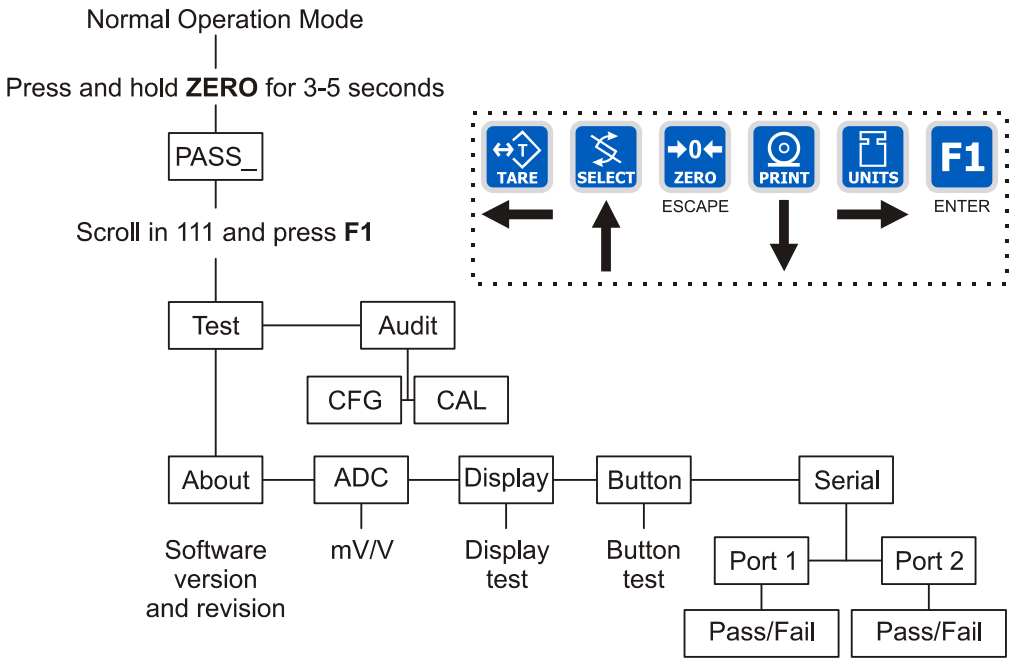


Figure 7.1 User menu flowchart

For specific instructions on the User menu see *Indicator Diagnostics* *on page 67*.

7.2 Supervisor Menu

The Model 1080 has a Supervisor menu, shown in Figure 7.2, you use to do the following:

- Set time and date
- Setup the various applications
- View, print and clear logs and cal reports
- Perform diagnostic tests
- View audit counters

WARNING: Entering this menu and changing settings may affect operation of the indicator and may require a service call to correct. Be sure you want to change settings before doing so.

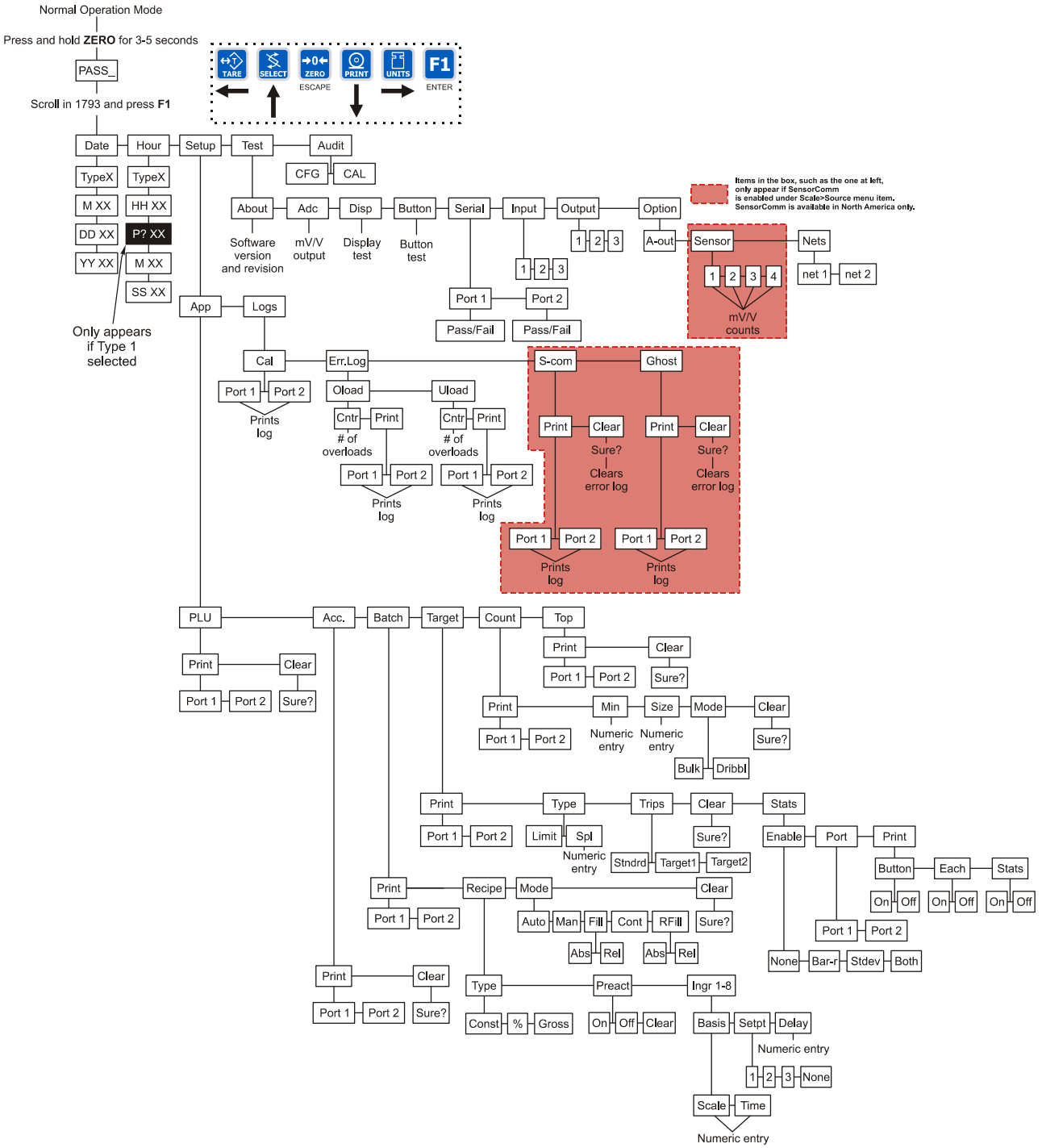


Figure 7.2 Supervisor menu

Password for the Supervisor menu is 1793.

1. Access the Supervisor menu by pressing and holding the **ZERO** key for 3-5 seconds…

   PASS_ is displayed.

2. Scroll in the password, 1793 (see *Numeric Entry Procedure* *on page 13*) and press the **F1** key…

   dAtE is displayed. Use this to set the current date.

7.2.1 DATE (Set date)

3. From the ***dAtE*** display, press the **PRINT** key…

   tYPE0 is displayed. Dates styles are listed below along with number you enter to create that style:

   0=MM/DD/YY

   1=MM/DD/YYYY

   2=DD/MM/YY

   3=DD/MM/YYYY

See Figure 7.2 to reference the Supervisor's menu.

While in a menu, the annunciator lights at the top of the display flash as a reminder.

4. Scroll through the choices using the **TARE** or **UNITS** key and press the **F1** key to accept the displayed choice…

   M XX is displayed. This stands for month.

5. Scroll in the month number (01 for Jan., 02 for Feb., …12 for Dec) and press the **F1** key…

   DD XX is displayed. ***DD*** stands for date and ***XX*** represents the current value.

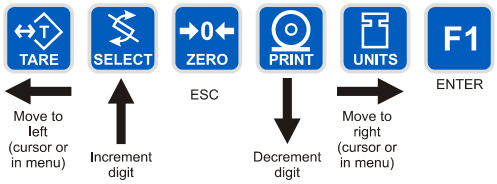
6. Scroll in the date and press the **F1** key…

   YY XX is displayed. ***YY*** stands for year and ***XX*** represents the current value.

7. Scroll in the year (04=2004, etc.) and press the **F1** key…

   dAtE is displayed.

Key legend reminder.



7.2.2 HOUR (Set time)

1. From the ***dAtE*** screen, press the **UNITS** key…

   Hour is displayed. Set the time in this item.

2. Press the **PRINT** key…

   tYPE0 is displayed. Time can be in 24 hour or 12 hour styles. Time styles are listed below along with number you enter to create that style:

   0=HH:MM

   1=HH:MM AM/PM

3. Scroll through the choices using the **TARE** or **UNITS** key and press the **F1** key to accept the displayed choice…

   HH XX is displayed. This stands for hour and its current value.

4. Scroll in the hour based on the type of time you selected in step 2 and press the **F1** key. If you picked 0 (military time) in step 2, skip to step 5. If you picked 1 (AM/PM time) continue below…

   P? yes or ***P? no*** is displayed. ***P? yes*** is for PM. ***P? no*** is for AM.

5. Toggle between the choices using the **TARE** or **UNITS** key and press the **F1** key to accept the displayed choice…

   M XX is displayed. ***M*** stands for minute and ***XX*** represents the current value.

6. Scroll in the minute (see *Numeric Entry Procedure* *on page 13*) and press the **F1** key …

   Hour is displayed.

7.2.3 SETUP (Setup menu)

1. From the ***Hour*** display, press the **UNITS** key…

   SEtuP is displayed. Use this submenu to print and/or clear application reports, choose operation modes or values for applications which have choices and view various function logs. Each is explained in the following steps.

APP (Application submenu)

2. From the ***SEtuP*** display, press the **PRINT** key…

   APP is displayed. Each application is listed below this menu item. Applications are enabled or turned on in a password protected menu the user does not have access to but each application's setup is done in this area of the Supervisor menu.

PLU (Product Look Up)

3. Press the **PRINT** key…

   PLU is displayed. This stands for Product Look Up. This memory channel contains all the parameter values and accumulator totals associated with all the different applications. This menu item lets you print out all the information in all the applications and/or clear it out.

The PLU report contains the following information for each of the 11 channels:
Channel #
ID #
Gross Accum.
Net Accum.
Count Accum.
Total
Tare Value
Lower Limit
Upper Limit
Piece Weight
Output Wt1
Output Wt2
Output Wt3

4. Press the **PRINT** key…

   Print is displayed. Use this item to print out a complete report of all application parameters and totals.

5. Press the **PRINT** key …

   Port 1 or ***Port 2*** is displayed. Use this item to select which port to use for printing the report.

A USB device port is slaved to serial port #2. If port #2 is selected, data will be sent via serial port 2 and USB.

6. Toggle between ***Port 1*** and ***Port 2*** using the **TARE** or **UNITS** key. press the **F1** key to accept the displayed choice…

   The report is printed and the display shows ***bUSY*** briefly then returns to ***Print***.

7. Press the **UNITS** key…

   CLEAr is displayed. Use this item to clear all the information stored for each application.

CAUTION! Only do this if you are sure you want the information permanently removed!

You may want to print out the reports before clearing all the information. See step 4 above.

8. Press the **PRINT** key to clear all the information OR skip to step 9…

   SuRE ? is displayed. This is asking if you are sure you want to clear the information. If you are, press the **PRINT** key. If you do not want to clear the data, press the **SELECT** key…

   CLEAr is displayed.

9. Press the **SELECT** key…

   PLU is displayed.

ACC Application

1. From the ***PLU*** display, press the **UNITS** key…

   Acc. is displayed. This stands for the accumulator application.

See Figure 7.2 to reference the Supervisor's menu.

2. Press the **PRINT** key…

   Print is displayed. Use this item to print out a complete report of accumulator totals.

3. Press the **PRINT** key …

   Port 1 or ***Port 2*** is displayed. Use this item to select which port to use for printing the report.

A USB device port is slaved to serial port #2. If port #2 is selected, data will be sent via serial port 2 and USB.

4. Toggle between ***Port 1*** and ***Port 2*** using the **TARE** or **UNITS** key. press the **F1** key to accept the displayed choice…

   Display shows ***bUSY*** briefly then returns to ***Print***.

5. Press the **UNITS** key…

   CLEAr is displayed. Use this item to clear all the information stored for this application.

CAUTION! Only do this if you are sure you want the information permanently removed!

You may want to print out the report before clearing all the information. See step 2 above.

6. Press the **PRINT** key to clear all the information OR skip to step 7…

   SuRE ? is displayed. This is asking if you are sure you want to clear the information. If you are, press the **F1** key. If you do not want to clear the data, press the **SELECT** key…

   CLEAr is displayed.

7. Press the **SELECT** key…

   Acc. is displayed.

BATCH Application

1. From the ***Acc.*** display, press the **UNITS** key…

   bAtch is displayed.

2. Press the **PRINT** key…

   Print is displayed. Use this item to print out a complete report of recipe information.

3. Press the **PRINT** key …

   Port 1 or ***Port 2*** is displayed. Use this item to select which port to use for printing the report.

A USB device port is slaved to serial port #2. If port #2 is selected, data will be sent via serial port 2 and USB.

4. Toggle between ***Port 1*** and ***Port 2*** using the **TARE** or **UNITS** key. Press the **F1** key to accept the displayed choice…

   Display shows ***bUSY*** briefly then returns to ***Print***.

5. Press the **UNITS** key…

   rEciPE is displayed. Use this item to create a recipe.

6. Press the **PRINT** key…

   tYPE is displayed. Set the type of recipe; Constant, Gross, or Percentage:

ConSt	You set the weights for each ingredient and the batch size is always the total of these ingredient weights.
GroSS	You set the gross weight at which each ingredient will stop. The ingredient is complete when the gross weight on the scale reads the value that was set, regardless of the weight on the scale when the batch was started.
%	You set the percentage of a total batch for each ingredient and you can pick a batch size and each ingredient amount will be calculated automatically.

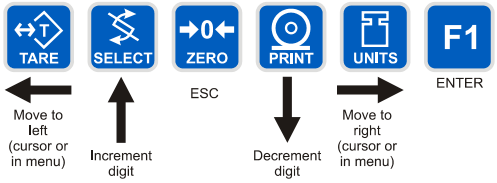
7. Press the **PRINT** key…

   Current setting is displayed.

8. Toggle between the choices by pressing the **TARE** or **UNITS** key. Press the **F1** key to accept the displayed choice…

   Your choice is selected and ***tYPE*** is displayed.

Key legend reminder.



9. Press the **UNITS** key…

   PrEAct is displayed. A preact is the time it takes an ingredient (which is falling from an auger or other feeding device) to reach the scale after the auger or feeder is shut off. There will always be material in "free-fall" after an ingredient is shut off and the indicator will automatically calculate this and update this value.

   The first time a batch is run, overage for any ingredient weight is calculated and the next time the ingredient is being weighed the output will be shut down so approximately 70% of the overage is reduced. This occurs each time a batch is run so that the system quickly learns and produces accurate batches.

   Under this item you can turn the preact on or off, or clear a current preact.

10. Press the **PRINT** key to set the preact…

    on or ***oFF*** is displayed.

11. Scroll through the choices (***on***, ***oFF***, ***CLEAr***) with the **TARE** or **UNITS** key. Press the **F1** key to accept the displayed choice…

    PrEAct is displayed.

12. Press the **UNITS** key…

    Ingr X is displayed. ***X*** is the ingredient number. You have up to 8 ingredients for which you can set the following:

    bASIS Set whether the ingredient is based on weight (Scale) or time (Time).

    SEtPt Set the output you want associated with the ingredient. Choices are 1, 2, 3 or None. Outputs must be enabled in a password protected menu. *Contact your local supplier for assistance with the password protected menu.*

    dELAY Set a time delay between when a basis is met and the next ingredient action is started.

13. Press the **PRINT** key…

    bASIS is displayed.

14. Press the **PRINT** key…

    The current setting is displayed; ***SCALE*** or ***TimE***.

See Figure 7.2 to reference the Supervisor's menu.

15. Scroll through the choices with the **TARE** or **UNITS** key. Press the **F1** key to accept the displayed choice…

    If you choose ***SCALE*** you are prompted to enter an ingredient weight. If you choose ***TIME***, your are prompted to enter a time value.

If SCALE is chosen for the basis, you can enter a negative weight to do an "unload." The selected output will activate until the entered amount of weight is removed from the scale.

16. Scroll in values using the numeric entry procedure and press the **F1** key.

    bASIS is displayed.

17. Press the **UNITS** key…

    SEtPt is displayed.

18. Press the **PRINT** key…

    1 is displayed. This stands for Setpoint 1.

19. Scroll through the choices with the **TARE** or **UNITS** key. Press the **F1** key to accept the displayed choice…

    SEtPt is displayed.

    If you chose ***1*** this ingredient will use output #1. The same is true for the 2 and 3 choices. If you choose ***NONE***, no output will be activated when the ingredient is called by the recipe.

20. Press the **UNITS** key…

    dELAY is displayed.

21. Press the **F1** key…

    The current delay value in seconds is displayed.

22. Accept this value by pressing **F1** or scroll in a new value using the numeric entry procedure and press the **F1** key…

    dELAY is displayed. Repeat steps 12 through 22 for all the ingredients in your recipe.

23. Press the **SELECT** key twice…

    rEciPE is displayed.

24. Press the **UNITS** key…

    ModE is displayed. Use this item to set the mode of the batching application. Your choices are shown below.

    Auto In auto mode, after the user begins the batching process the indicator will activate the OP2 output when the weight for OP1 has been reached. When the weight for OP2 is reached, OP3 will activate. This happens with no intervention from the operator.

    MAn. In manual mode, after the user begins the batching process, the user must press the **F1** key to activate each subsequent output after each output weight is reached.

    Fill In fill mode, any recipe that has been setup is ignored. The filling process is run based on the values set for the outputs. In order to complete the filling process, at least one output must be enabled. Under this item you can choose one of the following:

        abS Setpoints activate when the **F1** key is pressed. When the net weight on the scale reaches the configured setpoint value, the setpoint will deactivate.

        rel When the **F1** key is pressed, the starting weight is captured and the setpoints activate. The setpoint will not deactivate until, the net weight on the scale reaches the starting weight plus the configured setpoint value.

    Cont Continuous batching mode. This mode is very close to the Auto mode, but in continuous mode, another batch is started immediately after the previous batch has finished. In Auto mode, the user must press the **F1** key to start each batch.

    rFill Reverse Filling mode of operation. This mode is very similar to the filling mode. However, the weight on the scale should be above the configured setpoint weight when the **F1** key is press in order for the setpoint to be activated. When the weight on the scale decreases enough to fall below the configured setpoint value, the setpoint will deactivate. Under this item you can choose one of the following:

        abS Setpoints activate when the **F1** key is pressed. When the net weight on the scale reaches the configured setpoint value, the setpoint will deactivate.

        rel When the **F1** key is pressed, the starting weight is captured and the setpoints activate. The setpoint will not deactivate until, the net weight on the scale reaches the starting weight plus the configured setpoint value.

25. From the ***ModE*** display, press the **PRINT** key…

    The current mode setting is displayed.

26a. Toggle between the choices by pressing the **TARE** or **UNITS** key. If you choose ***Auto***, ***MAn.*** or ***Cont***, press the **F1** key to accept the displayed choice.

ModE is displayed.

OR

26b. If you choose ***Fill*** or ***rFill*** you will see ***abS*** or ***rel***. Toggle between the choices by pressing the **TARE** or **UNITS** key. Press **F1** to accept the displayed choice and press the **SELECT** key…

ModE is displayed.

27. Press the **UNITS** key…

CLEAr is displayed. Use this item to clear all the information stored for this application.

CAUTION! Only do this if you are sure you want the information permanently removed!

You may want to print out the report before clearing all the information. See step 2 in this section.

28. Press the **PRINT** key to clear all the information OR skip to step 29…

SuRE ? is displayed. This is asking if you are sure you want to clear the information. If you are, press the **F1** key. If you do not want to clear the data, press the **SELECT** key…

29. Press the **UNITS** key…

Print is displayed.

30. Press the **PRINT** key…

Port 1 is displayed.

31. Toggle between ***Port 1*** and ***Port 2*** using the **TARE** or **UNITS** key. Press the **F1** key to accept the displayed choice…

The recipes and batch report will be printed.

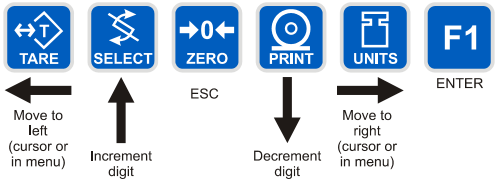
A USB device port is slaved to serial port #2. If port #2 is selected, data will be sent via serial port 2 and USB.

32. Press the **SELECT** key…

bAtch is displayed.

TARGET application (Checkweighing)

Key legend reminder.



1. From the ***bAtch*** display, press the **UNITS** key…

   tArGEt is displayed. Use this item to print and clear reports for the checkweigher application and to set the type of sampling to be used, Limit or Sample.

2. Press the **PRINT** key…

   Print is displayed. Use this item to print out a complete report of checkweigher information.

3. Press the **PRINT** key …

   Port 1 and ***Port 2*** is displayed. Use this item to select which port to use for printing the report.

A USB device port is slaved to serial port #2. If port #2 is selected, data will be sent via serial port 2 and USB.

4. Toggle between ***Port 1*** and ***Port 2*** using the **TARE** or **UNITS** key. Press the **F1** key to accept the displayed choice…

   Display shows ***bUSY*** briefly then returns to ***Print***.

5. Press the **UNITS** key…

   tYPE is displayed. Use this to choose the mode of setting the target weight for the checkweighing application: ***limit*** or ***SPL*** (sample)

6. Press the **PRINT** key…

   limit or ***SPL*** (sample) is displayed. See note below.

*You do not set the limits in this menu. Limits are set in normal operation mode. This menu item, **tYPE**, allows you to set the mode of choosing the target weight and limits.*

Target outputs can only be reset when the scale returns to within the configured Gross Zero Band. Gross Zero Band is configured in a password protected menu. Contact your local supplier for assistance with the password protected menu.

limit In this mode you enter the upper and lower limits for your item and the indicator will use those values to run the display.

SPL In this mode you use a correct weight 'product' on the scale to set the target weight. The indicator will use this weight to run the display. After ***SPL*** is chosen, a number is displayed. This is the sample tolerance. When a sample is done, the upper and lower limits will automatically be ± (sample tolerance) divisions from the target weight.

7. Toggle between the choices by pressing the **TARE** or **UNITS** key. Press the **F1** key to accept the displayed choice…

   tYPE is displayed.

8. Press the **UNITS** key…

   triPS is displayed. Use this to set outputs to follow over/under/accept or to function as standard outputs.

9. Press the **PRINT** key…

   StndRd, ***tArGt 1*** or ***tArGt 2*** is displayed. Each is explained below:

   StndRd Trips are configurable outputs. An output value can be entered in weigh mode of operation.

   tArGt 1 Latched outputs. When weight is added to the scale, the appropriate trip; OP1, OP2 or OP3, activates. The trip is now activated, and will remain active, until the scale returns to gross zero.

   tArGt 2 Unlatched outputs. When weight is added to the scale, the appropriate trip; OP1, OP2 or OP3, activates. The trip will de-activate when weight decreases below the configured trip.

10. Scroll through the choices by pressing the **TARE** or **UNITS** key. Press the **F1** key to accept the displayed choice…

    triPS is displayed.

11. Press the **UNITS** key…

    CLEAr is displayed. Use this item to clear all the information stored for this application.

CAUTION! Only do this if you are sure you want the information permanently removed!

You may want to print out the report before clearing all the information. See step 2 in this section.

12. Press the **PRINT** key to clear all the information OR skip to step 25…

    SuRE ? is displayed. This is asking if you are sure you want to clear the information.

13. If you want to clear the information, press the **F1** key. If you do not want to clear the data, press the **SELECT** key…

    CLEAr is displayed.

14. Press the **UNITS** key…

    StAtS is displayed. This item lets you enable and set up the gathering of statistical information.

15. Press the **PRINT** key…

    EnAbLE is displayed…

16. Press the **PRINT** key to configure statistics…

    One of the following is displayed:

    nonE No statistical features are enabled.

    bar-r The XBar-R feature is enabled.

    Stdev The standard deviation feature is enabled.

    both Both the Standard Deviation and XBar-R features are enabled.

17. Scroll through the choices by pressing the **TARE** or **UNITS** key. Press the **F1** key to accept the displayed choice…

    EnAbLE is displayed.

18. Press the **UNITS** key…

    Port is displayed.

The information printed depends on the statistical features that are enabled and the type of printing that is enabled.

19. Press the **PRINT** key…

    Port 1 or ***Port 2*** is displayed.

    Port 1 Choose this and statistical information will be sent out port #1.

    Port 2 Choose this and statistical information will be sent out port #2 or the USB port.

20. Toggle between the choices by pressing the **TARE** or **UNITS** key. Press the **F1** key to accept the displayed choice…

    Port is displayed.

21. Press the **UNITS** key…

    Print is displayed…

22. Press the **PRINT** key…

    Each of the three settings listed below can be enabled or disabled individually.

    button Enable this item and a report of the data captured is printed when you press the **PRINT** key. The information printed depends on the features that are enabled. If this type of printing is enabled, the user will be prompted to clear the statistical information after the **PRINT** key is pressed to print the report. Press the **F1** key to clear statistical data.

each Enable this item and each sample weight is printed as it is captured. The range (under, over, accept) that the sample falls into is also printed.

StAtS Enable this item and a report of the data captured is automatically printed when the sample size is reached. If this type of printing is enabled, the statistical information will automatically be cleared after the report is printed.

23. Scroll through the three items in step 22 by pressing the **TARE** or **UNITS** key.

24. Press the **PRINT** key to see the ***on***/***oFF*** choice for each. Toggle between the choices by pressing the **TARE** or **UNITS** key. Press the **F1** key to accept the displayed choice…

    Repeat for all three items in 22.

25. Press the **SELECT** key three times to return to the…

    tArGEt menu item.

COUNT Application

1. From the ***tArGEt*** display, press the **UNITS** key…

   Count is displayed. Use this item to clear and print reports for the count application.

2. Press the **PRINT** key…

   Print is displayed. Use this item to print out a complete report of count application information.

3. Press the **PRINT** key …

   Port 1 or ***Port 2*** is displayed. Use this item to select which port to use for printing the report.

4. Toggle between ***Port 1*** and ***Port 2*** using the **TARE** or **UNITS** key. Press the **F1** key to accept the displayed choice…

   Display shows ***bUSY*** briefly then returns to ***Print***.

5. Press the **UNITS** key…

   Min is displayed. Use this item to set the minimum sample weight as a percent of capacity.

6. Press the **PRINT** key…

   Current value is displayed.

7. Scroll in a percentage from 0-100% using the numeric entry procedure and press the **F1** key…

   Min is displayed.

8. Press the **UNITS** key…

   SiZE is displayed. This is the sample size parameter. Use this to set the sample size for the counting application.

9. Press the **PRINT** key…

   Current sample size is displayed.

10. Use the numeric entry procedure to scroll in a new sample size. Press the **F1** key to accept the displayed choice…

    SiZE is displayed.

11. Press the **UNITS** key…

    ModE is displayed. Use this to select the sampling mode from these two choices;

    buLK This is bulk sampling. In this method you place the specified number of items on the scale all at once (in bulk) and the scale automatically starts to calculate piece weight when the weight stabilizes. The count is then displayed.

    dribbL This is dribble sampling. In this method you count out the specified number of items onto the scale and when you are ready, press the **F1** key and the scale starts to calculate piece weight and then shows the count.

12. Toggle between the choices by using the **TARE** or **UNITS** key. Press the **F1** key to accept the displayed choice…

    ModE is displayed.

13. Press the **UNITS** key…

    CLEAr is displayed. Use this item to clear all the information stored for this application.

CAUTION! Only do this if you are sure you want the information permanently removed!

You may want to print out the report before clearing all the information. See step 2 in this section.

14. Press the **PRINT** key to clear all the information OR skip to step 15…

    SuRE ? is displayed. This is asking if you are sure you want to clear the information. If you are, press the **F1** key. If you do not want to clear the data, press the **SELECT** key…

    CLEAr is displayed.

15. Press **SELECT**…

    Count is displayed.

TOP (Peak) Application

1. From the ***Count*** display, press the **UNITS** key…

   tOP is displayed. Use this item to clear and print reports for the peak application.

2. Press the **PRINT** key…

   Print is displayed. Use this item to print out a complete report of peak application information.

3. Press the **PRINT** key…

   Port 1 or ***Port 2*** is displayed. Use this item to select which port to use for printing the report.

4. Toggle between ***Port 1*** and ***Port 2*** using the **TARE** or **UNITS** key. Press the **F1** key to accept the displayed choice…

   Display shows ***bUSY*** briefly then returns to ***Print***.

5. Press the **UNITS** key…

   CLEAr is displayed. Use this item to clear all the information stored for this application.

CAUTION! Only do this if you are sure you want the information permanently removed!

You may want to print out the report before clearing all the information. See step 2 above.

6. Press the **PRINT** key to clear all the information OR skip to step 7…

   SuRE ? is displayed. This is asking if you are sure you want to clear the information. If you are, press the **F1** key. If you do not want to clear the data, press the **SELECT** key…

   CLEAr is displayed.

7. Press the **SELECT** key…

   Top is displayed.

8. Press the **SELECT** key…

   APP is displayed.

LOGS (Log submenu)

9. From the ***APP*** display, press the **UNITS** key…

   LOGS is displayed. The Logs menu item allows you to view, print or clear logs for the following:

   Calibration

   Overload and Underload Errors

   SensorComm Errors

   Ghost Errors

10. Press the **PRINT** key…

    CAL is displayed. You must print out this log to view it. Below is a sample of a calibration log printout:

    Calibration Log:

    ```
    Time: 23:58

    Date: 12/17/2003


    Scale Serial#: 123456

    Calibration Zero:

    0.3456 mV/V


    Calibration Span:

    2.3455 mV/V @ 3000 lb
    ```

11. Press the **F1** key to print the report…

    Port 1 or ***Port 2*** is displayed. Use this to choose which port to print through.

12. Toggle between the port choices using the **TARE** or **UNITS** key and press the **F1** key to accept the displayed choice…

    Report is printed and display returns to ***CAL***.

13. Press the **UNITS** key…

    Err.LoG is displayed.

14. Press the **PRINT** key…

    oLoAd is displayed. This is the overload counter.

15. Toggle between ***oLoAd*** and ***uLOAD*** (overload) by using the **TARE** or **UNITS** key and press the **F1** key to accept the displayed choice…

    Under both ***oLoAd*** and ***uLOAD*** are choices to view the counter (***Cntr***) or print (***PRINT***) the report.

16. Toggle between ***Cntr*** and ***Print*** by using the **TARE** or **UNITS** key and press the **F1** key to accept the displayed choice…

    If you chose ***Cntr***, the overload or underload count will be displayed.

    If you chose ***Print***, you can choose the port to print through and press the **F1** key. The counter value for overload or underload will be printed.

    Example:

```
Overloads:
   0 overloads
   00:00 on 00-00-00

Underloads:
   0 underloads
   00:00 on 00-00-00
```

17. When you are done with the error log section, press the **SELECT** key repeatedly until…

    Err.LoG is displayed.

See the section SensorComm Errors to see the list of error codes.

The S-COM log only appears if the scale is configured as a SensorComm scale. The Ghost log will only appear if ghosting is enabled.

18. Press the **UNITS** key…

    S-COM is displayed. This is the SensorComm error log. See a sample below:

```
SensorComm Log:
      Error #1: 15:00 on 12-17-03

      Misc:
```

```
Overloads:
12 overloads

Last overload:
12:00 on 12-17-03
```

19. Press the **PRINT** key…

    Print is displayed.

20. Press the **PRINT** key to print the report.

    Port 1 or ***Port 2*** is displayed. Use this item to select which port to use for printing the report.

21. Toggle between ***Port 1*** and ***Port 2*** using the **TARE** or **UNITS** key. Press the **F1** key to accept the displayed choice…

    Display shows ***bUSY*** briefly then returns to ***Print***.

22. Press the **UNITS** key…

    CLEAr is displayed. Use this to clear the log from memory.

23. Press **PRINT** to clear the log…

    SuRE ? is displayed.

24. Press the **F1** key to clear the log…

    CLEAr is displayed.

25. Press the **SELECT** key…

    S-COM is displayed.

26. Press the **UNITS** key…

    GHoST is displayed. This is the Ghost error log. See a sample below.

    ```
    Ghost Log:

    Ghost is not engaged.Time: 12:16

    Date: 04-12-06
    ```

27. Press the **PRINT** key…

    Print is displayed.

28. Press the **PRINT** key to print the report.

    Port 1 or ***Port 2*** is displayed. Use this item to select which port to use for printing the report.

29. Toggle between ***Port 1*** and ***Port 2*** using the **TARE** or **UNITS** key. Press the **F1** key to accept the displayed choice…

    Display shows ***bUSY*** briefly then returns to ***Print***.

30. Press the **UNITS** key…

    CLEAr is displayed. Use this to clear the log from memory.

31. Press **PRINT** to clear the log…

    SuRE ? is displayed.

32. Press the **F1** key to clear the log…

    CLEAr is displayed.

33. Press the **SELECT** key…

    GHoST is displayed.

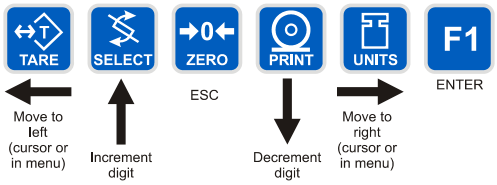
34. Repeatedly press the **SELECT** key until…

    SEtuP is displayed.

    This completes the Setup submenu of the Supervisor menu. You can return to normal operation (step 35) or go to the next submenu item, ***tESt***, by pressing the **UNITS** key.

35. Press the **ZERO** key to return to normal weighing mode. You will be prompted to save the changes you've made. Press the **ZERO** key to abort any changes made or press **F1** to accept them and return to normal operating mode.

Key legend reminder.



7.2.4 TEST (Test menu)

1. From the ***SEtuP*** display, press the **UNITS** key…

   tESt is displayed. This menu lets you view indicator information and test the display, keypad, serial ports, inputs and outputs.

ABOUT (Indicator information)

2. Press the **PRINT** key…

   About is displayed. Press the **PRINT** key then repeatedly press the **UNITS** key to view the part number and revision level for the software found in your indicator.

   Press **SELECT** key to return to ***About***.

ADC (Analog scale test)

3. From the ***About*** display, press the **UNITS** key…

   Adc is displayed. This is the mV/V output of the connected analog scale.

4. Press the **PRINT** key…

   The mV/V value is displayed. This value should increase as weight is applied to the scale

5. Press the **SELECT** key…

   Adc is displayed.

DISP (Display test)

6. From the ***Adc*** display, press the **UNITS** key…

   diSP is displayed. This is the display test item.

7. Press the **PRINT** key to perform a dynamic test of the display.

8. Press the **ZERO** key to stop the dynamic test…

   The display flashes a few more times then ***diSP*** is displayed.

BUTTON (Key test)

9. From the ***diSP*** display, press the **UNITS** key…

   button is displayed. This is the button test item.

10. Press the **PRINT** key to perform a button test. Each key you press will be reflected on the display screen to confirm the button is functioning correctly.

11. Press the **ZERO** key to stop the button test.

    button is displayed.

SERIAL (Serial port test)

12. From the ***button*** display, press the **UNITS** key…

    SEriAL is displayed. This is the serial test item.

13. Press the **PRINT** key to access the serial test.

    Port 1 is displayed.

14. Jumper the transmit and receive lines on the serial port and press the **PRINT** key…

    The display should show ***PASS***. If there is a problem the display will show ***FAIL***.

15. Press the **SELECT** key…

    Port 1 is displayed.

16. Press the **UNITS** key…

    Port 2 is displayed. Repeat steps 14 and 15 to test port 2.

17. Press **SELECT** key…

    SEriAL is displayed.

INPUT (Input test)

18. From the ***SEriAL*** display, press the **UNITS** key…

    InPut is displayed. This is the input test item.

19. Press the **PRINT** key to access the test.

    1 2 3 is displayed. ***1*** stands for input 1, etc.

20. If you jumper pins 1 and 2 of the I/O connector on the bottom of the indicator…

    1 becomes ***0*** until the jumper is removed.

    To test input 2, jumper pins 1 and 3. ***2*** becomes ***0*** until the jumper is removed.

    To test input 3, jumper pins 1 and 4. ***3*** becomes ***0*** until the jumper is removed.

21. Press the **SELECT** key…

    InPut is displayed.

OUTPUT (Output test)

22. From the ***InPut*** display, press the **UNITS** key…

    outPut is displayed. This is the output test item.

23. Press the **PRINT** key to access the test.

    1 is displayed. This stands for output 1.

24. Press the **PRINT** key…

    The display toggles between ***on*** and ***oFF***. This will toggle the output off and on. Monitor the output to see that it is turning off and on. Use a Trips Interface Unit (TIU3) or other output device.

25. Stop the test by pressing the **SELECT** key…

    1 is displayed.

26. Press the **UNITS** key…

    2 is displayed.

27. Repeat steps 23 - 25 for outputs 2 and 3…

28. Press the **SELECT** key…

    outPut is displayed.

OPTION

29. From the ***outPut*** display, press the **UNITS** key…

    oPtion is displayed. Under this item are these options you can test; ***A-out***, ***SEnSor*** (if Sensorcomm is installed) and ***nEtS*** (networks). See the instructions below.

A-OUT test

30. From the ***oPtion*** display, press the **PRINT** key…

    A-Out is displayed. This stands for the analog output test.

31. Press the **PRINT** key…

    A numeric entry screen is displayed.

32. Scroll in a percentage between 0 and 100 and press the **F1** key…

    The analog output will put out that percentage of voltage. For example: If you have output set from 0 to 10V and you scroll in a percentage of 25, the analog output voltage should read 2.5 volts. You can continue to scroll in other percentages, press the **F1** key and check the analog output voltage.

33. When you are finished testing the analog output, press the **F1** key…

    A-Out is displayed.

SENSOR test

This test can be used to properly adjust the deadload of the scale. Each sensor should have similar mV/V outputs if the physical load on the scale is equally distributed.

34. From the ***A-Out*** display, press the **UNITS** key…

    SEnSor is displayed. Use this to test the function of each weight sensor attached via SensorComm.

35. Press the **PRINT** key…

    1 is displayed.

36. Scroll through the available weight sensor numbers by pressing the **TARE** or **UNITS** key. Press the **F1** key when the sensor you want to test is displayed…

    mV/V output of the selected sensor is displayed.

37. Apply weight to the scale to verify the mV/V level changes.

38. Press the **F1** key to exit the test…

    Sensor number is displayed.

39. Repeat steps 35 - 37 for each sensor you want to test.

40. Press the **SELECT** key…

    SEnSor is displayed.

NETS test

41. From the ***SEnSor*** display, press the **UNITS** key…

    nEtS is displayed.

42. Press the **PRINT** key…

    nEt 1 is displayed.

43. Toggle between ***nEt 1*** or ***nEt 2*** using the **TARE** or **UNITS** key and press **PRINT** when the network you want to view is displayed.

    The first screen of network configuration information is displayed.

44. Repeatedly press the **PRINT** key to view all the configuration information. The display will return to ***nEt 1*** or ***nEt 2*** when you've seen all the information.

This completes the ***tESt*** submenu. Press the **SELECT** key until ***tESt*** is displayed and then press the **UNITS** key to go to the ***Audit*** submenu

To return to normal weighing mode, press **ZERO**. If you press **ZERO** you will be prompted to save any changes made. Press **ZERO** to abort any changes or press the **F1** key to save changes.

7.2.5 AUDIT (Audit counters) menu

The next section of the Supervisor menu is the AUDIT submenu. This menu lets you view configuration and calibration audit counters. These counters cannot be changed, only viewed.

Follow these steps to access each item in the AUDIT submenu:

CFG (Configuration audit counter)

1. From the ***tESt*** display, press the **UNITS** key…

   Audit is displayed.

2. Press the **PRINT** key…

   CFG is displayed. This stands for the Configuration audit counter. Use this item to see how many times this indicator has been configured.

3. Press the **PRINT** key…

   A number is briefly displayed, then ***CFG*** is displayed. This is the number of times this indicator has been configured.

CAL (Calibration audit counter)

4. From the ***CFG*** display, press the **UNITS** key…

   CAL is displayed. This stands for the Calibration audit counter. Use this item to see how many times this indicator has been calibrated.

5. Press the **PRINT** key…

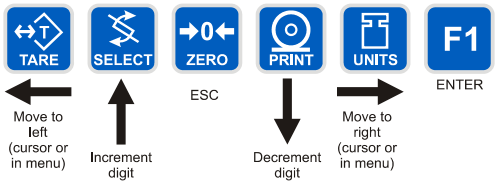
   A number is briefly displayed, then ***CAL*** is displayed. This is the number of times this indicator has been calibrated.

6. Press the **SELECT** key…

   Audit is displayed.

This completes the AUDIT submenu and the Supervisor menu. Press the **ZERO** key to return to normal weighing mode.

Key legend reminder.



8 Indicator Diagnostics

8.1 Testing Indicator Functions

The User menu lets you test various functions of the indicator. The User menu is shown in Figure 8.1. Instructions for using the menu are found below.

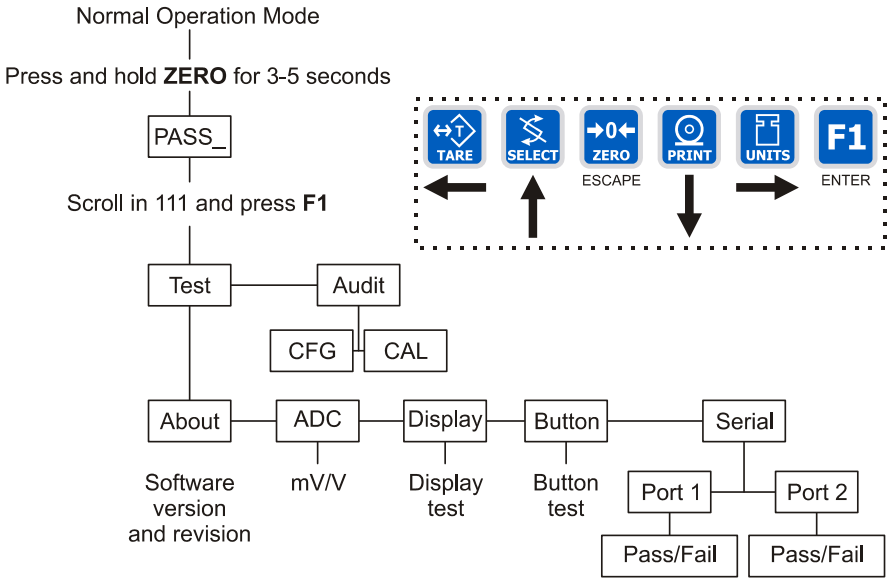


Figure 8.1 User menu

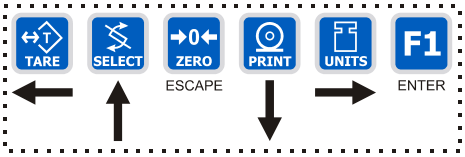
1. Access the User menu by pressing and holding the **ZERO** key for 3-5 seconds.

   PASS_ is displayed.

2. Key in the User menu password (111) and press **F1**.

   tESt is displayed.

Choose the first digit using the UP or DOWN keys. Use the LEFT and RIGHT keys to advance or backspace through the entry.



3. Press the **PRINT** key.

   About is displayed. Press the **PRINT** key then the **UNITS** key to view the part number and revision level for the software found in your indicator.

   Press **SELECT** key to return to ***About***.

4. Press the **UNITS** key…

   AdC is displayed. This is the mV/V output of the connected analog scale.

5. Press the **PRINT** key…

   The mV/V value is displayed. This value should increase as weight is applied to the scale

6. Press the **SELECT** key…

   AdC is displayed.

7. Press the **UNITS** key…

   diSP is displayed. This is the display test item.

8. Press the **PRINT** key to perform a dynamic test of the display…

   All parts of the display flash.

9. Press the **ZERO** key to stop the test…

   The display flashes a couple more times and then ***diSP*** is shown.

10. Press the **UNITS** key…

    button is displayed. This is the button test item.

11. Press the **PRINT** key to perform a button test. Each key you press will be reflected on the display screen to confirm the button is functioning correctly. The **ZERO** key is excluded from this test. It is used to stop the testing and return to the menu item

12. Press **ZERO** key to stop the button test.

    button is displayed.

13. Press the **UNITS** key…

    SEriAL is displayed. This is the serial test item.

14. Press the **PRINT** key to access the serial test.

    Port1 is displayed. If you jumper the transmit and receive lines on the serial port and press the **PRINT** key, the display should show ***PASS***. If there is a problem the display will show ***FAIL***.

15. Press the **SELECT** key after checking the port function…

    Port1 is displayed.

16. Press the **UNITS** key…

    Port2 is displayed. Repeat the test from step 14 to check the port.

17. Press the **SELECT** key twice to exit the serial test.

    SEriAL is displayed.

18. Press the **SELECT** key…

    tESt is displayed.

19. Press the **UNITS** key…

    Audit is displayed.

20. Press the **PRINT** key…

    CFG is displayed. This stands for the configuration audit counter.

21. Press the **PRINT** key to see the number of times the configuration has been altered on this indicator.

22. Press the **SELECT** key…

    CFG is displayed.

23. Press the **UNITS** key…

    CAL is displayed. This stands for the calibration audit counter.

24. Press the **PRINT** key…

    The number of times the indicator has been calibrated is displayed.

25. Press the **ZERO** key twice…

26. The display returns to normal operation mode.

This completes the User menu.

9 Ethernet Industrial Protocols

9.1 Ethernet IP Explicit Messaging

9.1.1 AWTX Input Point Object (Data Out)

Class Code: 64 hex

Table 9.1

Class Attributes	Supported services for this attribute (hex)	Data Type
NA		

Table 9.2

Instance Attributes	Supported services for this attribute (hex)	Data Type	Instances
03 (Value)	0E (Get_Attribute_Single)	SINT, INT, DINT, USINT, UINT, UDINT, REAL (based on network config in indicator	17 - all enabled data items in one message. 1-16 (”out” data item x in indicator is bound to instance x)

9.1.2 AWTX Output Point Object (Data In)

Class Code: 65 hex

Table 9.3

Class Attributes	Supported services for this attribute (hex)	Data Type
NA		

Table 9.4

Instance Attributes	Supported services for this attribute (hex)	Data Type	Instances
03 (Value)	10 (Set_Attribute_Single)	SINT, INT, DINT, USINT, UINT, UDINT, REAL (based on network config in indicator	17 - all enabled data items in one message. 1-16 (”out” data item x in indicator is bound to instance x)

9.2 Ethernet IP Implicit Messaging

9.2.1 AWTX Assembly Instance for PLC Configuration

Input: 100

Output: 112

Configuration: 128

9.3 ModBus/TCP

9.3.1 Starting Register Locations for PLC Configuration

Input Read Only 30001

Input Read/Write 40001

Output Read/Write 40101

Read only values are mirrored at the Read/Write location.

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